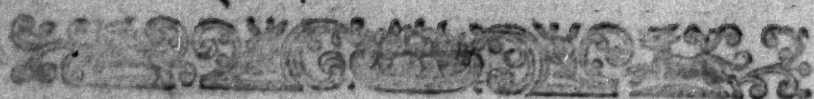


Mr. RAY's Travels.

VOL. I.





Mr. RAY's Travels

Vol. I.



TRAVELS

THROUGH THE

LOW-COUNTRIES,

Germany, Italy and France,

With curious Observations,

NATURAL, | MORAL,
TOPOGRAPHICAL, | PHYSIOLOGICAL, &c.

ALSO,

A CATALOGUE of PLANTS,

Found spontaneously growing in those Parts, and
their VIRTUES.

By the late Reverend and Learned

MR. JOHN RAY, F.R.S. *R*

To which is added,

An ACCOUNT of the TRAVELS of
FRANCIS WILLUGHBY, Esq;
Through great Part of *SPAIN*.

THE SECOND EDITION.

Corrected and Improv'd, and adorn'd with COPPER-PLATES.

VOL. I. 88

LONDON:

Printed for *J. Walthoe, D. Midwinter, A. Bettefworth and C. Hitch,*
W. Innys, R. Robinson, J. Wilford, A. Ward, J. and P. Knap-
ton, T. Longman, O. Payne, W. Shropshire, J. and R. Tenson,
T. Woodman, R. Chandler, and J. Wellington.

MDCCLXXXVIII. 14

TRAVELS

THE HOUSE

W. Maggare!

Germany, Italy and France

With curious Observations,

TOPOGRAPHICAL, PHYSIOLOGICAL, & MORAL.

MVSEVM
BRITAN
NICVM

By the late Reverend and Learned

MR. TONIN RAY, L.R.

To which is added,

An Account of the Travels of

FRANCIS WILCOX

Through great Part of SPAIN.

THE RECORD COLLECTION

Copyright and all other rights reserved.

LOY

100-100000

T. W. Schmitt, Jr., President
 J. W. Schmitt, Jr., Secretary
 J. W. Schmitt, Jr., Treasurer
 J. W. Schmitt, Jr., Secretary
 J. W. Schmitt, Jr., Treasurer



T H E
P R E F A C E.



When I had travelled over the greatest part of England in search of plants, and sufficiently informed myself what sorts my own country natural'y produced; I grew desirous to see what variety foreign countries of a different soil and temperature of air might afford. For which reason I was easily induced to accompany Francis Willughby Esq. Philip Skippon Esq. and Nathanael Bacon Gent. in a voyage beyond the seas. The success whereof, as to the number of plants found, exceeding my expectation I thought it might not be amiss for the satisfaction of the curious, and direction of those who may hereafter travel the same places with the like design, to publish a Catalogue of all not native of England that I had observed. But considering the paucity of those who delight in studies and enquiries of this nature, I have added a narrative of our whole voyage, with some Observations Topographical, Moral, Natural, &c. made by myself and the forementioned gentlemen. I shall say nothing to recommend them, but only that what I write

as of mine own knowledge is punctually and in all circumstances true, at least according to my apprehension and judgment, I not giving myself that liberty which many travellers are wont to take, and the common proverb seems to allow them.

I might have been more large concerning France but that we were frustrated in our design of making the Grand tour (as they there call it) being driven out thence by the French King's declaration, commanding all the English to withdraw themselves and their effects out of his dominions within two months time. And that country being near us, much travelled in and well known to those of our nation, and there being many Itineraries and Descriptions of it extant in print, I thought it less needful to write much concerning it.

As for Spain, it being a country out of the ordinary road of travellers, and those that have viewed it giving others little encouragement to follow their example, but rather condemning themselves for their curiosity, as having found nothing there which might answer their trouble and expence, that the reader may know something of it without the hazard and charge of travelling in it, I have added an Account of Mr. Francis Willughby's voyage through a great part of it. And this is all that I thought needful to acquaint the reader with by way of preface.



OBSERVATIONS
Topographical, Moral, and Physiological,
MADE IN A
JOURNEY
Through Part of the
LOW-COUNTRIES, &c.

April 18, 1663.



WE passed over in the packet-boat from Calais. Dover to Calais, a town formerly held by the English about 210 years, viz. from the 21. of King Edward III. when it was taken, till the last year of Queen Mary, when it was lost. Since that time, Anno 1596. it was taken by the Spaniards under Arch-duke Albert in three days time, only the castle held out seven or eight. And last of all, Anno 1598. it was restored to the French upon the treaty at Vervin, who now hold it. It is advantageously situate for defence, and now very strongly fortified after the modern fashion with an impenetrable wall and bastions of earth, a deep trench full of water to the landward, and a large citadel. The new wall and citadel were built about 44 years since. The old stone-wall and

OBSERVATIONS *Topographical,*

and ditch are still remaining, but inclosed within the new. The town for bigness exceeds *Dover*, and seem'd to us frequent and full of people. It hath a large square *Piazza* or market-place, wherein are two great markets weekly kept, the one on *Tuesdays*, the other on *Saturdays*. The government is by a *Mayor* and four *Eschevins* chosen annually by the burgessees or free-men.

Graveling.

From *Calais*, *April 21.* we travelled to *Dunkirk*, by the way taking a view of *Graveling*, a town neither large nor well built, and, at our being there, but thinly inhabited; yet stands it in so low and plashy a level, and is environed with so many out-works and great ditches of water, that one would think it were by force inexpugnable, and wonder that in so short time it should be constrained to surrender to the *English* and *French* besieging of it, *Anno 1658.* Before we came into the town we passed over five draw-bridges.

Dunkirk.

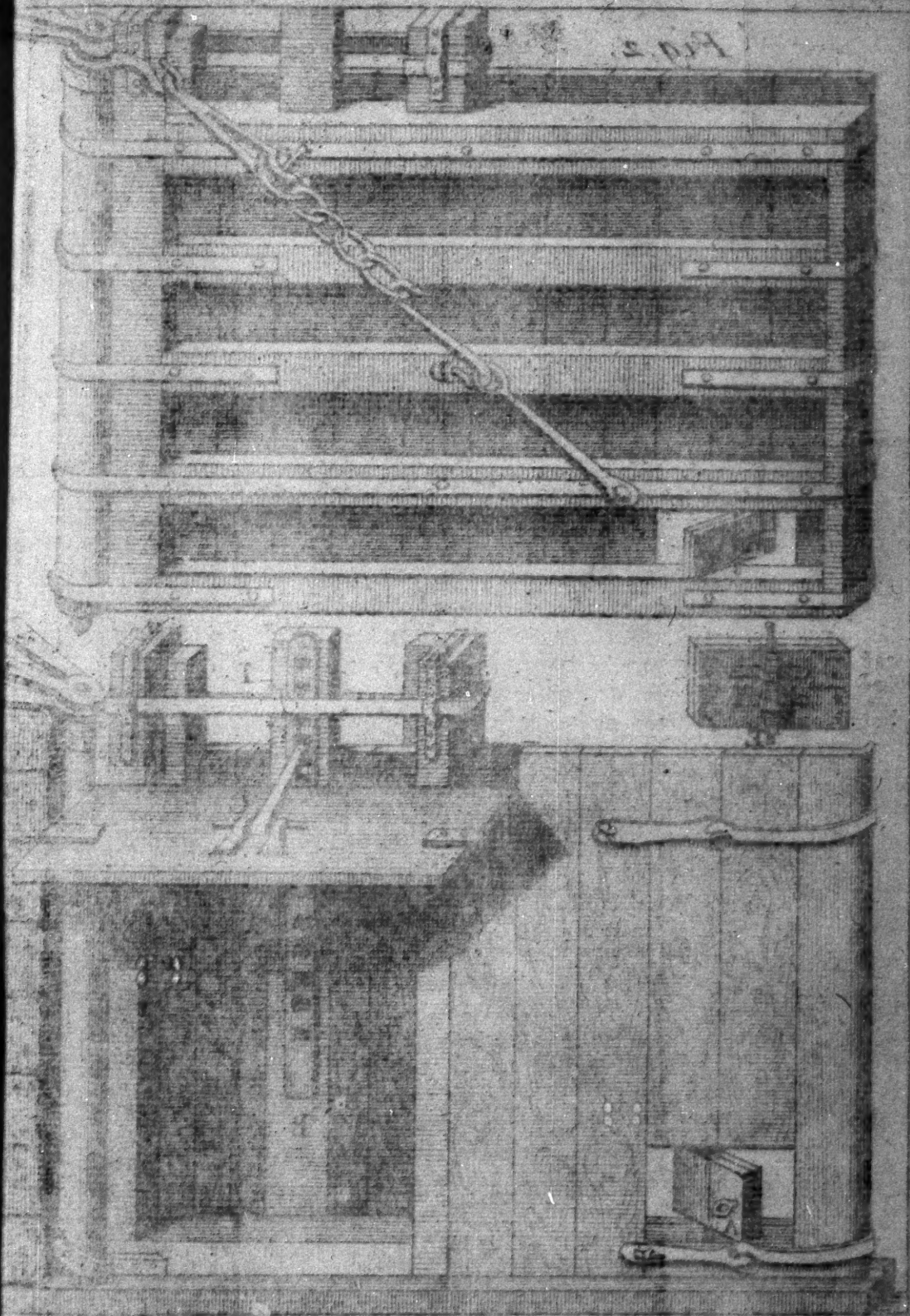
Dunkirk is one of the four port-towns of *Flanders*, about the bigness of *Cambridge*, according to our estimation; wellbuilt and populous, strongly fortified all about where it is capable: only toward the *Downs* or sandy hills on the southwest-side of the town, though there hath been much cost bestowed in raising forts, yet were they almost filled up and spoiled with sand driven in by the force of stormy winds, against which it will be very hard to secure any fort that shall be there erected.

Nieuport.

From *Dunkirk*, *April 23.* we rode along the sea-coast to *Ostend*, diverting at *Nieuport*, to refresh ourselves and get a sight of the town. This is another of the ports of *Flanders*, and a place of good strength. It hath a long and secure haven, but scarce capable of ships of any great burthen, a handsome key, broad and strait streets. The houses generally but low-built, and of timber. The inhabitants maintain themselves chiefly by fishing.

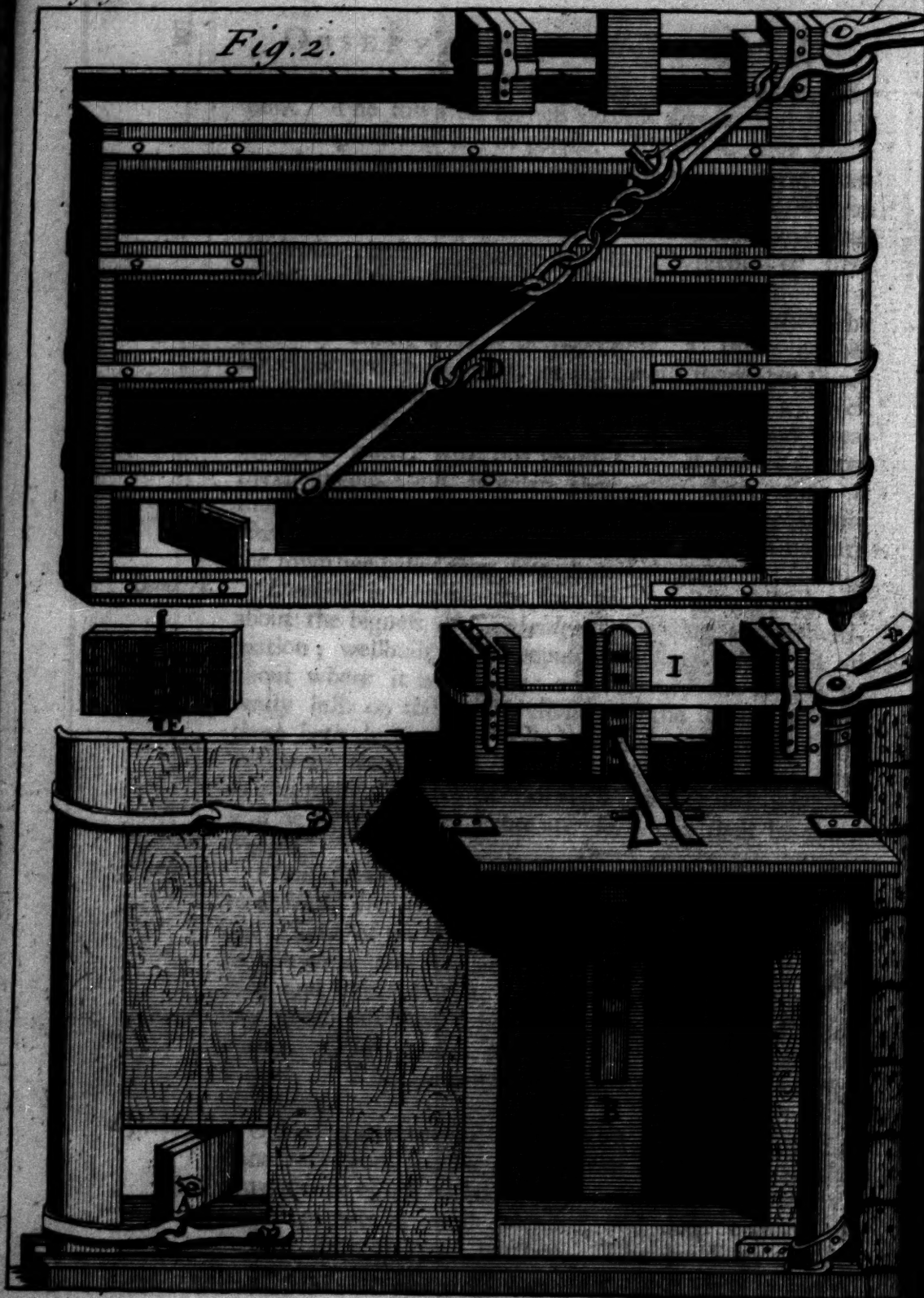
Ostend.

Ostend is another of the port-towns of *Flanders*, a place very considerable as well for its strength as the convenience of its harbour, which is of good capacity, safe from winds, well defended, and deep enough to receive ships of great burthen. The buildings of the

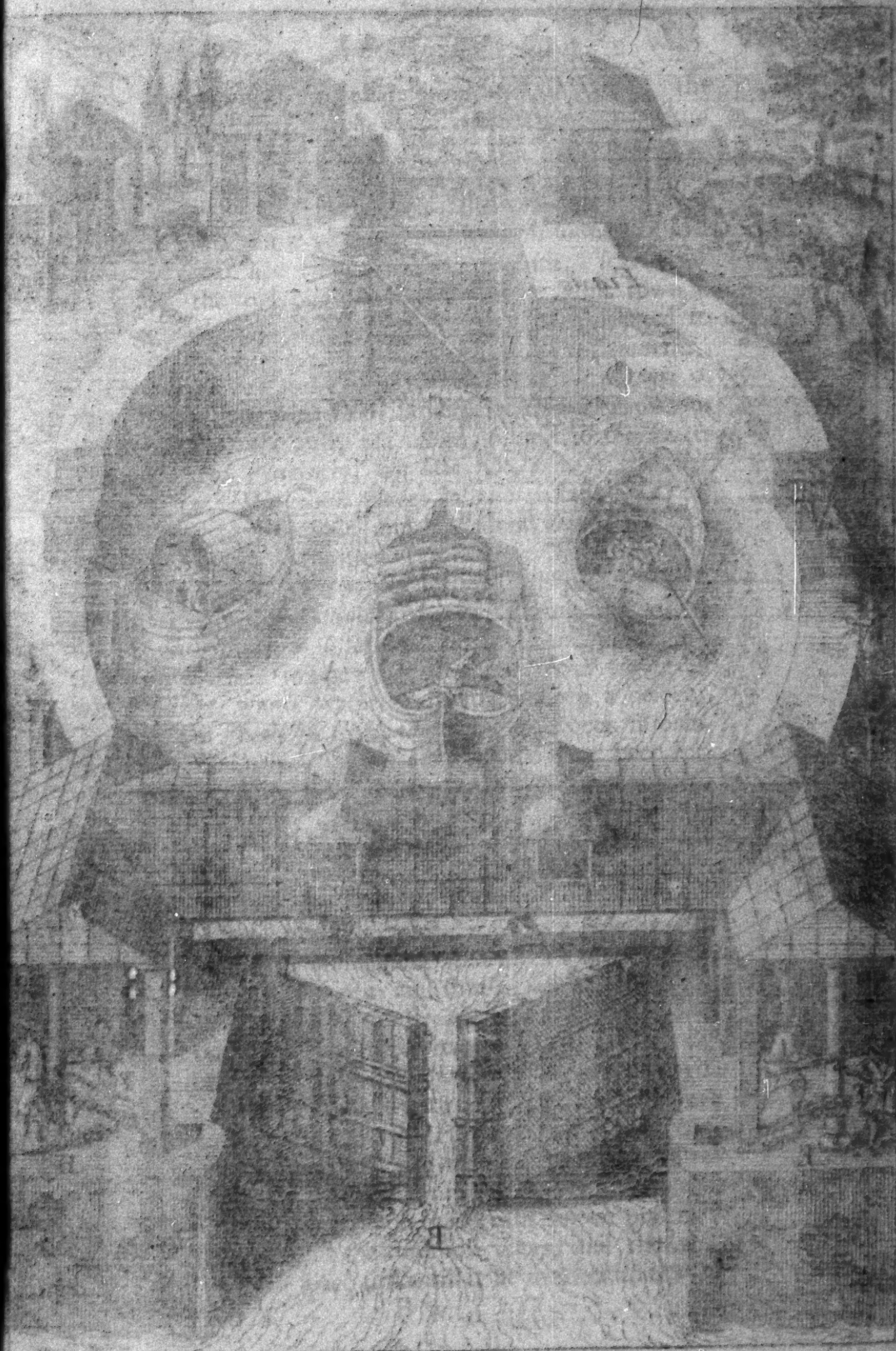


The figure of the gate as well of inside of the machine

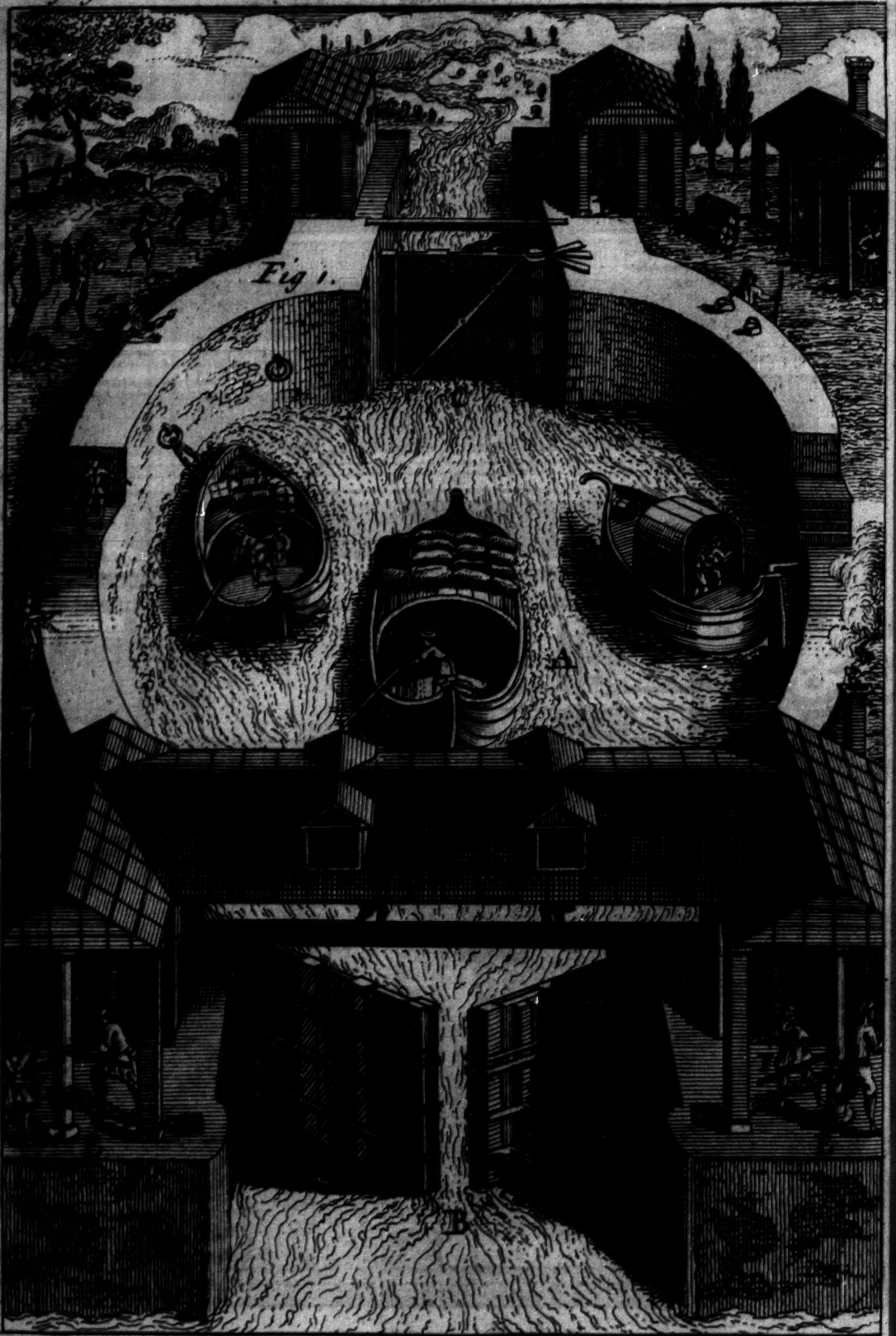
Fig. 2.



The figure of the gates as well of y^e inside of them as the o



Open for a look to keep up the memory of my friends
the use of a monument



Gates for a Lock to keep up the water of any River for
the use of Navigation.

Moral, and Physiological.

3

town are not tall, but handsome and uniform; the streets regular, well paved, exactly level and strait. And it is no wonder they should be so, the present town having been contrived and set out all at once. For when it was surrender'd up to Arch-duke *Albert*, after that famous siege of three years, the *Spaniards* found nothing there but great heaps of earth and rubbish, scarce one house of the old building remaining. This town is most regularly and exactly fortified, so that it seemed to us one of the strongest pieces in all the *Low-Countries*.

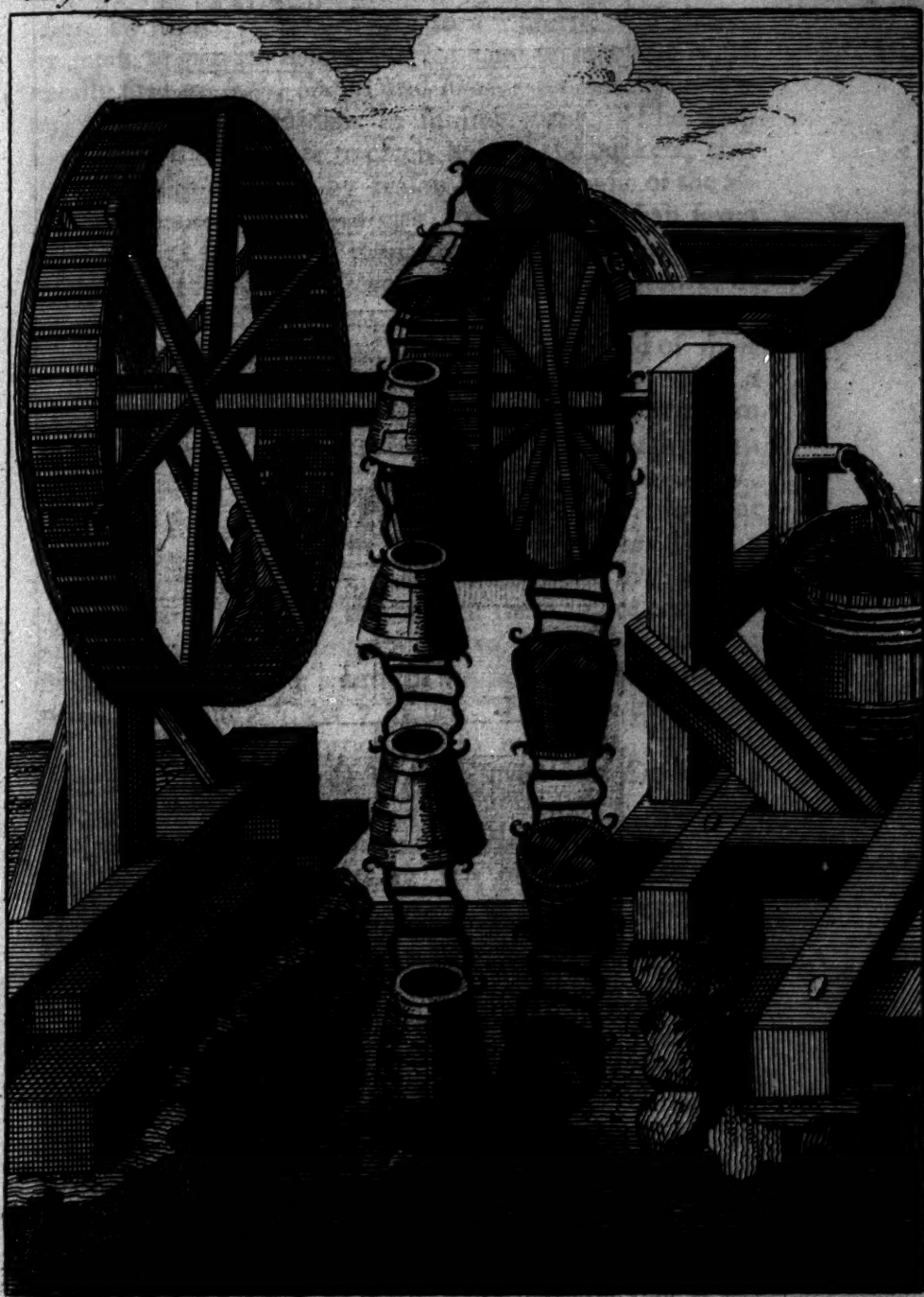
The fourth, by some esteemed the fifth port-town of *Sluys*. *Flanders*, which hath the largest and most capacious harbour of all the rest, viz. *Sluys*, subject to the States of the United Provinces, we saw not.

April 24. We took places in the passage-boat for *Bruges*, and at a league and half's end came to a lock or sluice, where we shifted our boat. These locks or *Sostegni* (as the *Italians* significantly call them) are usually placed at a great declivity of any channel or fall of water, and serve to sustain or keep up the water (as the *Italian* name imports) to make a river navigable which either wants water or hath too steep a descent. There are of them in *England* (as we have been informed) upon *Guildford* river in *Surrey*, and have been formerly upon the *Trent*. They are usually thus contrived: First, there are placed a pair of folding-doors or flood-gates cross the channel to stop the water descending: then, a competent space being left to receive boats and lighters, &c. another single gate: in each of these gates, toward the bottom, is made a hole or window, fitted with a convenient shut or wicket (*Portello* the *Italians* call it) to open and shut as occasion requires. When a vessel comes down stream to the *Sostegno*, first they open the *Portello* of the foremost gates, and let the water into the inclosed space, which will necessarily rise there till it come to be equal with the level of that above the gates; then they shut the *Portello*, and, the stream making no resistance, easily draw back the gates, and receive in the boat. Which done, they open the *Portello* of the lower gates, whereupon the stream above presently drives to and keeps fast the foremost gates, and the water in the inclosed space sinks till it be even with that in

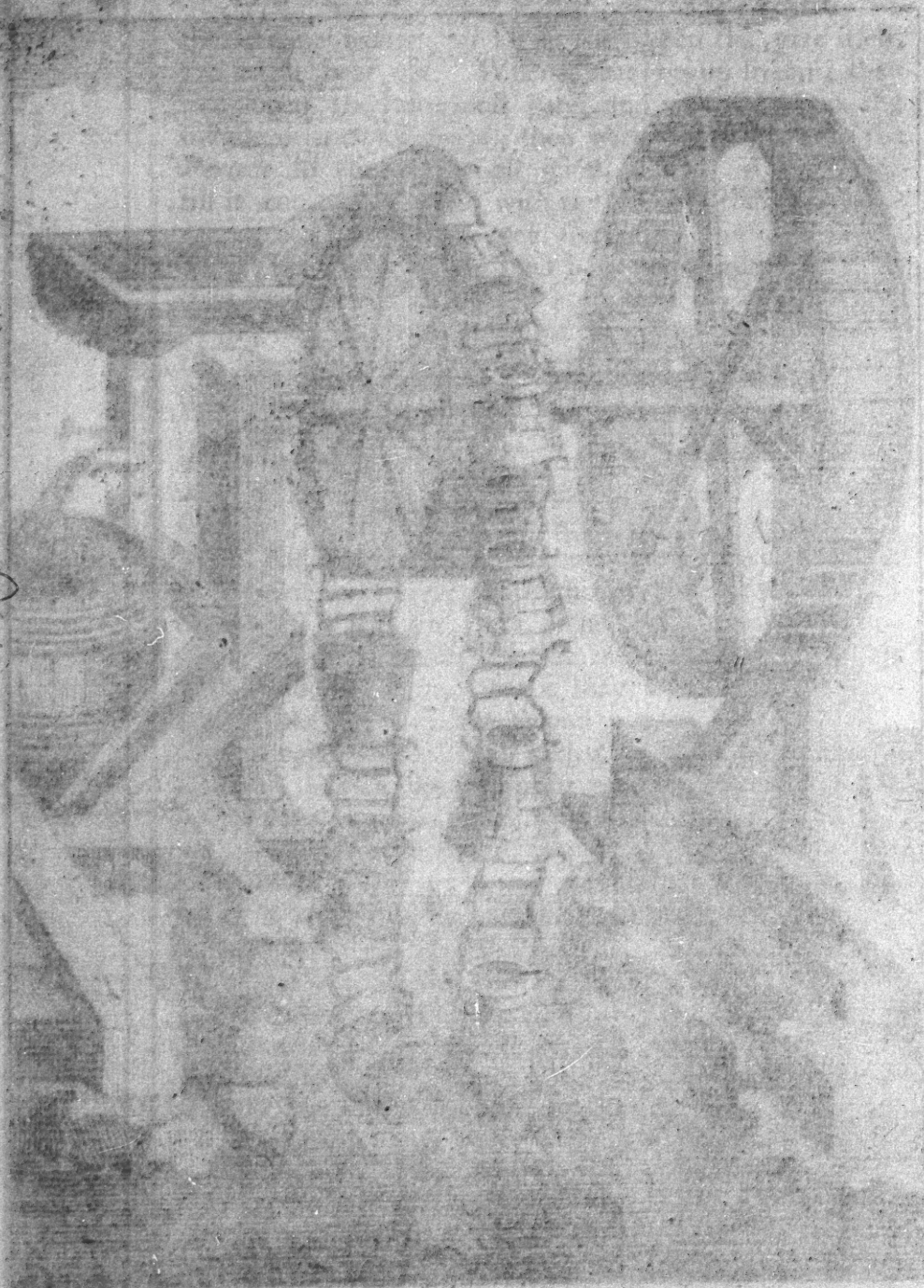
the channel below ; and then they open the gate itself, and let the boat out. When a boat goes up stream, they first open the lowermost gate, and receive it into the middle or inclosed space ; then withdraw or set open the *Portella* in the uppermost gates, letting in the water till it come to be equal with the level of that above the gates ; and lastly draw back the gates themselves, and let out the boat. *N. B.* That both upper and lower gates open against the stream, and are driven to and kept shut by it ; and that the leaves of the upper gates lie not in the same plain when shut, but make an obtuse angle, the better to resist the force of the water.

Bruges.

Bruges, so called from the multitude of bridges therein, is four leagues distant from *Ostend*, a large city and well built, many of the houses being four or five, and some six stories high. It is of a round figure, well walled and intrenched, hath been formerly one of the chief mart-towns in *Europe* ; and though it be at present less than what it was for trade, riches, and number of people, yet it is no mean, poor, or inconsiderable place, but in so good condition, that it may well challenge place among the cities of the second rate in *Europe*. It is now an episcopal see, and hath been noted for handsome women. Here we first observed the custom mention'd by *Erasmus* in his *Colloquies*, of fastening a small piece of white linnen to the ring or rapper of the door of that house where a woman lies in. *A. Forte præteriens has ædes vidi cornicem obductam candido linteo : demirabar quid esset causa. Fa. Adæone hospes es in hac Repub. ut ignores hoc esse symbolum puerperii in ædibus ?* *Erasm. Colloqui. Puerpera.* We saw the manner of railing up water for the use of the citizens by a chain whereon are fastened cylindrical iron buckets. This chain is round in form of a bracelet, neck-lace, or wheel-band, and put over a large *Axis* deeply furrowed, from which it hangs down into a well of water, and being turned about by the *Axis*, the descending buckets have their mouths downward, and take up water as they pass through the well ; which (ascending with their mouths upward, but a little inclining from the chain outward) they bring up to the *Axis*, to which so soon as they are come, by reason of their position they must needs turn it out into a trough placed under the *Axis*,



*An Engine to raise water with a chain of Buckets
taken out of Kirchers Mundus Subterraneus*



Handwritten text at the bottom of the page, likely a title or description, written in a cursive script. The text is difficult to decipher due to its orientation and the quality of the image.

Moral, and Physiological.

Axis, by which it is conveyed to a cistern, and thence by pipes to private houses. This kind of machine is generally used in *Italy*, *Spain*, and *France* for raising up water, to water their gardens in summer-time. The deep furrows in the *Axis* are to catch hold of the buckets, that the chain slip not back by reason of the weight of the ascending buckets. In this city are no more than seven parish-churches, but of monasteries or religious houses (as they call them) good store, 60 according to *Golnitz*. In the church of *Nostre-dame*, or *St. Mary*, lies the body of *Charles* the Hardy, duke of *Burgundy*, and lord of most of the *Netherlands*, under a stately monument with a *French* inscription upon it, which tells us, that he was slain in the battle of *Nancy*, 1476. and his body brought from *Nancy* hither by his great grand-child *Charles V.* Emperor, and that *K. Philip II.* erected to him that monument. We saw in this town one *John Tate*, a man of a gigantick stature, born at *Schoonhoven* in *Holland*: one of a middle stature might well stand under his armpit, from his middle finger's end to his elbow was 25 inches and a half, the length of his hand to his wrist 11 inches, his middle finger 7 inches. He was well shaped, and all his limbs proportionable to his height. He was afterwards (as we heard) brought over into *England* to be shown.

Near this city (as *Boetius de Boot*, who was native thereof, relates) digging ten or twenty ells deep in the earth, they find whole woods of trees, in which the trunks, boughs, and leaves do so exactly appear, that one may easily distinguish the several kinds of them, and very plainly discern the series of leaves which have fallen yearly. These subterraneous woods are found in those places which 500 years ago were sea, and afterwards either left and thrown up by the sea, or gained from it, the tides being kept off by walls and fences. But before the fore-mentioned term of 500 years, there is no memory that these places were part of the continent. And yet seeing the tops of these trees do for the most part lie eastward, because (as is probable) they were thrown down by western winds, which on this coast are most boisterous and violent,

it will necessarily follow that, in the most antient times and before all memory of man, these places were firm-land, and without the limits of the sea.

The describer of *Amsterdam* tells us, that in *Friesland* and *Groningland*, there are great numbers of these under-ground trees, found and digged up in mosses and fenny grounds where they dig for turves. In *England* also there are found of them plentifully in many places, the wood whereof they usually call *Moss-Wood*, because it is for the most part digged up in the mosses, or moorish, boggy fens and levels where they get turves; though sometimes it be found in firmer grounds, and sometimes in the sides of mountains. The question is, How these trees came to be buried so deep under ground? To which we may probably answer, That many ages ago before all records of antiquity, yea, before primitive fame or tradition itself, these places were part of the firm land, and covered with wood; afterwards being undermined and overwhelmed by the violence of the sea, they continued so long under water, till the rivers brought down earth and mud enough to cover the trees, fill up these shallows, and restore them to the firm land again. In like manner upon the coast of *Suffolk* about *Dumwich*, the sea doth now, and hath for many years past very much incroached upon the land, undermining and overwelming by degrees a great deal of high ground; insomuch that antient writings make mention of a wood, a mile and half to the east of *Dumwich*, which is at present so far within the sea. Now, if in succeeding ages (as likely enough it is) the sea shall by degrees be filled up, either by its own working, or by earth brought down by land-floods still subsiding to the bottom, and growing up over the tops of these trees, and so this space again added to the firm land; the men that shall then live in those parts (if the world so long last) will, it's likely, dig up these trees, and as much wonder how they came there, as we do at the present moss-wood.

And

Moral, and Physiological.

And now that I am speaking of filling up and atterring (to borrow that word of the *Italians*) the skirts and borders of the sea, I shall take leave to add by the bye, that to me it seems very probable, that all the *Low-Countries* have been in this manner gained from the sea. For *Varenius* in his Geography tells us, that, sinking a well in *Amsterdam*, at near an hundred foot deep, they met with a bed or floor of sand and cockle-shells; whence it is evident that of old time the bottom of the sea lay so deep, and that that hundred foot thickness of earth above the sand arose from the sediments of the waters of those great rivers, which there emptied themselves into the sea, and in times of floods brought down with them a-bundance of earth from the upper grounds: which yet is a strange thing, considering the novelty of the world, the age whereof, according to the usual account, is not yet 5600 years. That the rain doth continually wash down earth from the mountains, and atterrate or add part of the sea to the firm land, is manifest from the *Lagune* or flats about *Venice*; the *Camarg* or isle of the river *Rhofsne* about *Aix* in *Provence*, in which we were told that the watch-tower had, in the memory of some men, been removed forward three times, so much had been there gained from the sea; and many places in our land: only it is a received tradition, and may perhaps be true, that what the sea loses in one place it gets in another. That the height of the mountains, at least those which consist not of firm rocks, doth continually diminish, is I think very likely, not to say certain. I have been credibly informed, that whereas the steeple of *Craich* in the *Peak* of *Derbyshire*, in the memory of some old men yet living, could not have been seen from a certain hill lying between *Hopton* and *Wirksworth*, now not only the steeple, but a great part of the body of the church may from thence be seen: which without doubt comes to pass by the sinking of a hill between the church and place of view. Hence it would follow, that in process of time (but it would be many thousands of years

first) all the hills and mountains (except the rocky) would by floods and shots of rain be quite washed away, and the whole earth levelled.

But to return to the trees. One material exception against our solution still remains, and that is, that a great many of these subterraneous trees digg'd up in *England* are thought to be firs, whereas that kind of tree doth not at present, and consequently we have reason to believe never did, grow wild in this kingdom. To which I answer, that this exception would indeed much puzzle me, were it certain and manifest, that this is fir-wood, which is so generally reputed from its grain, inflammability, and other qualities. But since it doth not clearly appear to me so to be, I shall respite my answer, till I be fully satisfied concerning it.

Gaunt.

From *Bruges*, April 27. we went by boat to *Gaunt*, the greatest city of *Flanders*; whence the Emperor *Charles V.* who was born here, was wont to boast, that he could put *Paris* into his *Gant*, in which word there is an equivoue, *Gant* in *French* signifying a glove. Yet is the wall too great for the buildings, inclosing much void ground. In this city, as in *Bruges*, are 7 parish churches, and, according to *Golnitz*, about 55 religious houses. We ascended the tower, called *Bellefort*, about four hundred steps high, and saw the famous bell, called *Roland*, not so great as we imagined. This city is well built, well wall'd, and trench'd about, and the inhabitants to us seemed very busy and industrious.

Alost.

From *Gaunt*, April 30. We travelled to *Brussels*, about thirty *English* miles distant, passing through *Alost*, a fortified town of some note.

Brussels.

Brussels is the capital city of *Brabant*, where the *Spanish* governor of these provinces, who was then the marquis of *Caracene*, usually resides. It is well built, large, and populous. The streets are broad; the stadt-house a fair and uniform building. The common people here, and also at *Antwerp*, *Levain*, *Mechlin*, and other cities of *Brabant*, (as hath been noted by others) make use of dogs to draw little carts and wheel-barrows laden with commodities about the streets. But for the advantage they make of them, setting

setting aside the maintaining of an old custom, I think they might as well employ their own arms and shoulders. In the gallery by the riding-place, is an echo, which reflects the voice fifteen times as we were assured: we observed about ten distinct reflections, the wind hindering us as to the rest. At this time it happened *Ludovicus de Bills* to be in town, whom we visited, and saw five bodies which he had with him, embalmed and preserved after his newly invented manner, entire with all their entrails and bowels. He was then going to the university of *Lovain*, with whom he had made an agreement for discovery of his art, and reading publick anatomy lectures.

Our next remove (*May 2.*) was to *Lovain*, a large city, but neither well built nor well kept; only the stadt-house is a stately structure, and makes a fair show at a distance. The wall is of great extent, more in circuit than that of *Gaunt* by three rods, taking in much void ground. The colleges are in number 43, the names whereof together with their founders are exhibited in the ensuing catalogue which we there found published in print.



*Almæ Universitatis Lovani-
ensis Collegia ac Pædagogia
Anno Salutis CIO. IOC. LIV.
enumerata.*

1. **M**agnum sive Majus Theologicum, in via quam Præpositi vocant, omnium Academiae Collegiorum primum maximumque est; erectum in honorem S. Spiritus, Anno Dom. 1442. Universitatis decimo-sexto, per Ludovicum Rycium, Patricium Lovaniensem, ac Principum Brabantiæ Quæstorem: quod ex tenuibus exordiis (ut pleraq; alia) variorum donationibus ita excrevit, ut in aliud eidem adhaerens, quod hujus comparatione Minus dicitur, Anno 1562. divisum fuerit. Mirum, quam
- Humili, verum fælicibus, ortu,
Creverit auspiciis Academia magna LovanI.
3. Juris Utriusq; vulgò Baccalaureorum, S. Ivoii dicatum, in via nova, Anno 1483. per Robertum à Lacu Gandensem inchoatum, ac ab aliis auctum.
4. S. Donatiani, in viâ Felinâ, Anno 1484. Juris utriusq; studiosis fundatum, ita dictum, quia primus Fundator Antonius Haveron, decretorum Doctor, & Maximiliani I. Consiliarius, Præpositus fuit ad S. Donatiani Brugis: præcipuum agnoscit fautorem Joannem Carondeletum, ibidem Præpositum, atque Archiepiscopum Panormitanum.
5. Standonicum, in viâ Prætoriâ, à Joanne Standonck, Mechliniensi, Doctore Sorbonico, (qui & alias pauperum scholarium decus Parisiis, Cameraci, Valencenis & Mechliniæ condidit) in magnum Ecclesiæ bonum, Anno 1490. pauperibus fundatum.
6. Atrebatense, in viâ Præpositi, à Nicolao Rutherio, patriâ Luxemburgensi, & Atrebatiorum Episcopo, magnificè

domo atq; optima dote, Anno 1505. in honorem S. Nicolai inchoatum.

Winkelianum, in viâ cavâ, auctorem agnoscit ab Anno 1505. Joannem Winkelium, Conservatoris Academici Notarium: itemq; Joannem hujus fil. Doctorem Medicum, qui sua, sororisq; bona, circa An. 1554. ex voto patris, (si uterque, ut accidit, sine legitimâ prole decederet) in usum Collegii studiosorum J. U. impendit.

Houterlæum, in viâ Vaccariâ, Anno 1511. per Henricum de Houterle, Hooghstratanum, D. Petri, hic Scholar-cham ac Militem Hierosolymitanum, Anno 1643. renovatum.

Busldianum, vulgariter Trilingue, quod Linguae Hebraica, Græca, Latina in eo doceantur: juxta forum piscarium, auctorem habet Hieronymum Busldium, Luxemburgi, è sui cognominis pago oriundum, Præpositum Ariensem ac Francisci Archiepisc. Bisuntini fratrem, Anno 1517.

Pontificium, in viâ Prætoriâ, erexit Adrianus VI. Ultrajectinus. Pont. Max. ante Adrianus Florentinus dictus, quid illud, cum hic in D. Petri Decanus esset, Theologis sub tutelâ S. Augustini destinavit, & postea Pontifex confirmavit Anno 1522.

Sabaudia, in viâ Nummariâ, Anno 1548. ab Eustachio Ghapuis, Sabauda, Annessiacensi J. U. Doctore ac Carolo V. à Consiliis, &c. in gratiam suorum popularium, ut & aliud in patriâ in honorem S. Eustachii, magnificè extructum & dotatum.

S. Annæ, in viâ Præpositi, Nicolaus Goblet, Boviniensis, Dionantensis Præpositus, Anno 1553. fundavit.

Druitianum, in angulo vulgò Cucullino, à Michaele Druitio, oriundo ex Vollerinchove territorii Castletensis, J. U. Doctore, Prof. & hic ad D. Petrum Decano, qui obiit Anno 1559.

Van-dale, in viâ Præpositi, structuræ magnificentiâ, & hospitio Principum clarum, construxit Petrus Van-dale Antuerpianus, J. U. Doctor & Decanus Alostanus, Anno 1565.

Viglianum, quod etiam Frisonum, in via S. Quintini, Anno 1568. à Viglio ab Aytta Zuichema, Friso, Præposito Gandavensi, & apud Belgas privati Concilii Præsides, popularibus suis ac Gandavensibus cum amplâ dote ædificatum.

Præmon-

16. Præmonstratense, in viâ Præpositi, primordia sua debet Carolo vander Linden Parcensi, Egidio Heyns Averbodiensi, & Michaeli Maleno Ninoviensi Abbatibus, Anno 1571. Quibus postea accesserunt Grimbergensis, Antuerpiensis, Tongerloensis & Heilëssemensis.
17. Cranendonck, ad viam Judaicam incæpit Anno 1574. Auctore Marcello à Cranendonck, Taxandro, Tongelrensi D. Jacobi hic Canon. in honorem quinque Vulnerum Christi.
18. Divæi, in monte Capellæ, ut vocant, Auctor est Greg. Divæus, Bruxellensis, qui Namurci, Româ ex Jubilæo rediens, ad beneficii mercedem & itineris quietem è vitâ decessit, Anno 1576. Etatis suæ 22.
19. Brugelianum, unicum Medicorum, in viâ novâ, à Petro Brugelio Sylvæducensi Med. Doctore ac Professore, Anno 1577.
20. Seminarium Regium, in viâ Præpositi, à Philippo II. Hispaniarum Rege ac Belgarum Principe, de Academiâ & aliis titulis bene merito, procurante Joanne Vendevillio, Anno 1579.
21. Pelsianum, in viâ Prædicatorum, munificentia Joannis Pels à Recklinchusia, Westphali, huic Universitati ab actis, An. 1574. suis conterraneis fundatum & concinnè renovatum, An. 1622.
22. Montenſe, in viâ novâ, Joan. de Bievene, Montenſis, J. U. D. ac Professor, moriens reliquit, Anno 1596.
23. Seminarium Leodiense, in via monetali, S. Lamberto sacrum, auspiciis Serenissimi Electoris Ernesti Ducis Bavaricæ, Episcopi Leodiensis, &c. An. 1605. Opus & dote & structurâ Auctore suo dignum.
24. S. Willebrordi quod vulgò Sylvæducense, in viâ novâ, jam ab annis plus minus 20. initium habuit, confirmatum est 1625. morte Fundatoris sui Nicolai Zoesii Amorsfortii Episc. Sykæduc.
25. Bayanum sive Bayorum, in viâ cavâ, exordia prima acceperit à magno Theologo Michaeli du-Bay, Hannone, Melinensi, D. Petri hic Decano, quid illud erigere cœperat ad Ledam D. Augustino dicatum: transtulit deinde ad eum ubi nunc vîsitur locum præcipuus ejus Fundator Jacobus du-Bay è fratre nepos, similiterque S. Th. Doctör & Decanus D. Petri: hujus denique nepos Egidius S. Th. Doctör & Professor, Anno 1614. solemniter aperuit, ædificiis & dote magnificè auxit.

Moral, and Physiological.

13

Divæ Pulcheriæ, in foro Boario, fundatum bonis auspiciis Lovanii, Anno 1616. per divisionem cujusdam Foundationis Universitatis Colonienfis, magna quotidie incrementa sumit piâ multorum liberalitate.

26.

Ordinis Teutonici, ad viam lapideam exordiebatur Edmondus Huyn ab Ansteraedt Ord. Teut. Eques & Commendator Provincialis Balviæ Juncetaniæ, &c. Anno 1617.

27.

Canonicorum Regularium S. Augustini, in viâ lapideâ juxta S. Jacobum. 1618. procurantibus Antonio van Berghim Priore in Viride-Valle, & Joanne Petersem Bethlemitico juxta Lovanium.

28.

Mylianum vulgò Luxemburgense, in viâ vaccariâ, Auctore Joanne Mylio Luxemburgensi J. U. Doctore, qui ingentem pecuniâ summam moriens in hunc finem reliquerat, tandem stabilitum Lovanii vigesimo tertio à morte Fundatoris Anno, scilicet Dom. 1619.

29.

Hibernicum, in viâ quæ Bakelanica vocatur, Auctoritate Apostolicâ per sacram de propag. Fidei Congregationem studio & dote Eugenii Matthæi Archiepisc. Dublinensis, An. 1623. inchoatum.

30.

Alpense, in viâ Quintinianâ, per Edmundum Fouvent Chymacensem, Alnæ Ord. Cisterc. Abbatem, pro Monachis ejusdem Cœnobii Anno 1626. felicibus auspiciis ædificatum.

31.

Floressiense, in Bakelanicâ, Anno 1626. exordia sua accepit à Joanne Roberti Floressiensi Ord. Præmonst. Præsule, Supprie Generali ac Circariarum Floressiæ & Flandriæ Vicario.

32.

Joan. Malderi, in viâ Martinianâ, Episcopi Antuerpiensis, Anno 1633. coemptis in eum usum ædibus à V. N. Ludovico Tempelio, Prætoris Urbis Lovaniensis.

33.

Franc. Hovii, Londerzelii S. T. L. Pastoris ad S. Walburgim Antuerpiæ, in Monte filiceo, cui Fundator inscribi voluit Patrimonium Christi. Obiit An. 1633. Ibid. Decembris.

34.

Minimorum, pro Religiosis Ord. S. Francisci de Paula, Anno 1639.

35.

Beggardorum, pro Religiosis sui Ordinis, Anno 1640.

36.

Collegium S. Michaelis fundatum per R. & Eruditissimum D. Laurentium Zoenium Sacræ Theol. Licent. Insignis Ecclesiæ Collegiati S. Petri Lovanii Canonicum & Sacerdotem

37.

cerdotem Jubilarium Anno 1649. Obiit 20. Aprilis, 1651.

Sequuntur quatuor Pædagogia, ut vocant, in quibus Artes liberales Philosophiæque docentur, Academiarum omnium famossimæ Scholæ, de quibus hoc vulgare Tetra-
stichon :

Quatuor hîc inter sese Collegia certant
De Sophiæ studiis, & vincere quodque laborat.
Porcus alit doctos : volitat super omnia Falco :
Castrum bella gerit : florescunt Lilia primis.

38. Liliū, in viâ paganâ, cui nomen ab insigni adhæsit, SS. Joanni Evangelistæ, vero castitatis lilio, & Gislensæ sacrum est. Hujus Professor ac Rector primus Carolus Virulus, Castletensis, suæ ætatis Philosophus famossissimus, postquam annos 6. & 50. rexit officio & vitâ functus, An. 1493.

39. Falco in viâ cavâ, à Falcone insigni domus, Regentem & fautorem inter primos habuit Gasparem Kinschotium Turnhoutanum, qui obiit Ann. 1488. Pædagogium hoc fuit ex alio loco, qui hodièque vetus Falco dicitur, translatum à variis tandem & ipsa Facultate Artium cumulatè auctum : sub tutelâ est magnorum Philosophorum D. D. Dionysii Areopagitæ & Catharinæ. Industriâ & liberalitate D. Claudii Lossen, Havræi, S. T. ibidem Regentis ac Professoris, hæc, quæ modo visitur, splendidâ ædificii structurâ decoratum, Anno 1636.

40. Castrum, in viâ Castrensi, primum vocavit regentem Godefridum van Gompel, Dessellensem, qui ibidem ante conditam Universitatem literas humaniores docuit : electis Patronis Beatiss. Mariæ, turri fortissimâ, & S. Cornelio Papâ Martyre invincibili.

41. Porcus, in viâ Prætoriâ, structurâ & frequentia primum, cui hoc nomen mansit (cum alias Pædagogium Stanedonck audire malis) à demo in viâ Præpositi, quæ etiamnum hoc insigne Porci præfert, cui Pædagogium hoc quondam oppositum fuit, inchoatum, Auctore Joanne Widoë ; ejusque primus Rector fuit Henricus Loen Lovaniensis, vitæ sanctitate clarus. Martini Caverenne Regentis industriâ splendidis ædificiis ædornatum. D. D.

Antonio

Moral, and Physiological.

15

Antonio & Annæ hoc sacrum est, in quo adhuc humaniores docentur literæ: ut etiam in

*Vaulxiano, communiter Gandense, in viâ Longo-Bru-
lia dictâ, quod initium voto Francisci Nieuland Ganden-
sis habuit: dotem à Joanne del-Vaux, Anno 1593. Item*

Scholæ PP. Augustinianorum, in utilitatem Juventutis apertæ, Anno 1612.

42.

43.

Felixque augmentum precatur. J. O.

The several faculties are distinguished by their habits: Divinity-students wear constantly gowns and square caps; those of other faculties wear none, except at their publick exercises in the schools. The principal colleges, called *Pedagogies*, are four. In these only is philosophy taught by two professors, the one called *Primarius*, the other *Secundarius*. Those students that are gentlemen sit in a higher form, called *Scamnum Nobilium*; and give each of them six gilders quarterly to the *Primarius* professor, and two patacoons to the *Secundarius*. Those of inferior rank, who sit in the lower forms, give half so much to each. The *Primarius* reads in the morning from half an hour after six of the clock till half an hour after seven; then they go to mass till eight, and after that to their private studies till ten; then the professor reads again till eleven. In the afternoon the *Secundarius* professor reads from half an hour after one, till half an hour after two. He begins again half an hour after four, and reads till half an hour after five. All students must write after the professors in a large note-book, and in the intervals of lectures peruse and study what they wrote. The professors readings are divided into *Dictata*, which are theses or propositions, and *Annotata*, which are solutions of objections. The first thing they require of students, when they come to this university, is to be matriculated, and swear their belief of all the doctrines of the *Romish* church. The close or end of the oath is the same with that of our universities, *Ita me Deus adjuvet & hæc sancta Dei Evangelia*.

Young students give their names to the president of their college or pedagogy, and for every time they

are

are absent from lectures are punished a stiver, which is somewhat more than a penny *Englisb*. For every time they miss a publick exercise in law or physick, they pay three stivers; if they be to exercise themselves, and miss, they are mulcted twenty stivers. The students are not allowed to wear swords about the streets.

The professors of each pedagogy chuse yearly 12 of the best scholars who are of two years standing. These 48 are publickly examined, and out of them about 12 usually chosen to burses or exhibitions. The burses signify their diet, chamber, and a greater or less stipend, according as the burses are. It is very creditable to be chosen to a burse. He that is the first of the chosen hath a bell rung for him in his college 48 hours together without intermission. When they are thus chosen, they may go into what college they will and study what they please. They are commonly preferred to professorships, and afterwards to canons places. The degrees here conferred are *Batchelor*, *Licentiate*, and *Doctor*. In *Divinity* after two years standing they may be *Baccalaurei currentes*, after another year *Baccalaurei formati*. Seven years after this they may be *Licentiates* in divinity. They are seldom created *Doctors* till they attain to 50 years of age, unless they be very eminent for learning. Every *Batchelor* is called *Doctissimus*: A *Licentiate* in medicine *Peritissimus*, in law, *Consultissimus*, in divinity *Eximius*: *Doctors* of medicine and law are *Clarissimi*, of divinity *Eximii Domini*, & *Magistri nostri*. When any one goes out *Licentiate*, there is a treatment made, to which all the doctors and the opponents are invited, and have gloves given them. The graduate is attended from the schools with drums and trumpets. At his lodging a bell is hung up and rung for 24 hours together. He hath liberty to chuse a coat of arms, and is immediately reputed a gentleman.

The men of most note for learning in this university at present (1663.) are *Guischevius*, *Medicinæ & Matheseos Professor*. *Vopiscus Fortunatus Plempius*, *Medicinæ Professor primarius*, called *Fortunatus*, because he was cut out of his mother's womb, as we were

were informed. *Dorlix*, Med. Doctor. *Sinnichius*, Theologiae Doctor, an Irish-man. *Pontanus*, Theologiae Doctor, dean of S. Peter's, and Censor Librorum. *Bradly*, an Irish-man, Juris Canonici Doctor. *Loyens*, Juris Canonici Doctor. *Gulinx* was professor of philosophy here, but is now turned Protestant, and lives at *Leyden*: *Van Verve*, Theol. Professor primarius. The publick schools are old, mean, and homely.

May 4. We walked out of *Lovain* about half a mile to see the duke of *Areschoot*'s palace, and the *Celestines* cloister adjoining. We found, among the corn by the way-sides as we went, plentifully growing *Caryophyllus arvensis umbelliferus*. J. B. and *Alfine foliis* Plants as *hederaceis Rutæ modo divisis* Lob. both in flower. At about *Lovain* this city we first observed storks, women-porters, and soldiers begging on horse-back.

From *Lovain*, May 5. We travelled to *Mechlin*, *Mechlin*. *Malines* the French call it, a very elegant and well built city, exceeding our expectation both for beauty and greatness. It is the seat of an archbishop, and with a small territory of nine villages about it makes one of the seventeen provinces, called the lordship of *Mechlin*. The cathedral church is dedicated to St. *Rumbald*. Many manufactures exercised here of the most gainful sort, as making of linnen-cloth, casting of great artillery and bells; and which we especially took notice of tanning, there being two or three whole streets of tanners.

Hence May 5. We boated to *Antwerp*, a city for *Antwerp*. strength and beauty comparable to any of its bigness in Europe. For the latter, in my opinion, it much excels *Florence*, with which it is wont to be put in competition. And for the former, it is encompassed with a wall of earth faced with free-stone, of that thickness that there are several rows of trees and broad walks upon it; and with a ditch of water of a very great depth and breadth, excepting on that side the river *Scheld* washes it: so that, considering also the advantage of its situation in a low and level country, it seemed to me the strongest city in all the *Netherlands*. The citadel first built by the duke of *Alva*, and afterwards repaired by the prince of *Parma*, of

of a pentagonal figure, serves as well to bridle as defend the town. The houses of *Antwerp* are for the most part of brick, some few wooden ones of the antient building here and there remaining, which the owners are not suffered to repair. The chapel of the *Jesuites* college is very rich and sumptuous. The steeple of *S. Mary's* church is so curiously built and carved, that the Emperor *Charles V.* (as we were told) was wont to say, that it deserved to be kept in a case and shewn only upon holy-days. The *Exchange* or *Burse* was the pattern after which our old *Royal Exchange* was built, but in all respects inferior to it, the copy excelling the original. The *Stadthaus* is a magnificent structure. Several other publick buildings there are that deserve to be viewed, most of which are represented in the adjoined map. *Plantius's* printing-house, mentioned by *Golnitz* and others, is for a thing of that nature the best we have any where seen. This city for trading and wealth is much decayed since the *Low-Country* wars. In the garden of one *Franciscus van Steerbeck* a priest, we saw many rare plants: among others we took more especial notice of *Lentiscus*, *Pistacia*, *Spiræa Theophrasti*, *Barba Jovis frutex*, *Cerasus nana*, *Amygdalus nana*, *Althæa montis Olbii in Gallo-provincia*, *Morus fructu albo*, *Jasminum hederaceum*, *Lycium*, *Rosa sine spinis*, *Capparis leguminosa sive Fabago*, *Convolvulus heptaphyllus*, *Acanthus aculeatus*, *Esula rara Venetorum*, *Petroselinum Macedonicum*, *Daucus Creticus verus*, *Convolvulus Althææ folio*, *Thapsia latifolia*, *Ephemerum Matthioli*, *Pistolochia Virginiana*, *Pyrethrum verum Auricula ursi folio & flore Boraginis*, *Sandalida Cretica*, *Sabdariffæ species*, *Telephium legitimum Antiquorum*, *Gnaphalium Americanum flore luteo pleno*, *Spartum marinum*, *Laurus Alexandrina*, *Absinthium arboroscens*, *Lilium Allobrogum majus*, *Geranium tuberosum*, *Hellebori albi tres species seu potius varietates*, *Centaurium majus Helenii folio & Scolymi folio*, *Coralloides*, *Urtica fatua Virginiana*, *Campanula Damascena lactescens flore purpureo & albo*.

Lillo.

May 15. We took boat for *Middleburgh*; at *Lillo* a fort upon the *Scheld*, three leagues below *Antwerp*, belonging to the States of *Holland*, our boat

was search'd, as are all vessels going to and from *Antwerp*. The wind and tide favouring us, we reach'd *Middleburgh* before sun-set, having made in all this day about 54 *English* miles. Upon the flats we pass'd over, at a good distance from us, we saw several sea-calves upon the sands.

Middleburgh is the capital city of *Zealand*, large, *Middle-* well built, having spacious streets, populous, full of *burgh*. wealthy merchants, and well fortified, as are generally all cities and towns of any account in the united *Netherlands*. It is situate near the middle of the isle *Walachria*, whence do doubt it took its name, and not from *Metellus*, quasi *Metelli Burgum*, as some have fondly imagined. From that side the island respecting *Antwerp* is an artificial channel cut up to the town, capable of ships of good burthen, which come into the town, the said channel passing through and making havens in three or four of the streets. There are (as we were informed) about twenty churches of all sorts in this city, the *Lutherans*, *French*, *Anabaptists*, and *Jews* being here tolerated and allowed places of publick worship. At the stadthouse we observed two eagles kept, which we were told the citizens were obliged to by their charter, by which they have great immunities granted them by the Emperor, as freedom from arrests any where but in their own city, &c.

May 16. We walked out to *Flushing* about two *Flushing*. miles and an half distant from *Middleburgh*; a town once cautionary to the *English*, though not so large nor so well built as *Middleburgh*, and having narrow streets, yet very considerable for its strength and riches, the opportunity of its situation and conveniency of its harbour, ships of good burthen coming up into several streets of the town in artificial channels, and lying there secure from wind and weather.

May 19. We took another walk to *Vere*, called *Vere*. by the Dutch *Ter-Vere*, or *Camp-Vere*, some three miles distant from *Middleburgh* to the northward: a town for bigness inferior to *Flushing*, well fortified, having two fair harbours for ships with broad wharfs or keys within the walls. We returned back through *Armoerden*, a small town consisting of one street, yet intrench'd

about. Here hath been formerly a good trade driven. By the way we observed the sea-banks to be faced with a kind of matting of rushes or flags staked down as high as the tide usually arises, to defend them from being washed away by the water.

Bergen op zome.

May 20. We went by boat from *Middleburgh* to *Bergen op zome*, passing by *Rammekens*, a strong fort at the entrance of the channel leading to *Middleburgh*. *Bergen* is a place of very great strength, besides the wall and trench, being fortified with half moons, horn-works, &c. famous for the notable resistance it made first to the duke of *Parma*, and afterwards to the mar-ques *Spinola* besieging of it, *Anno* 1622. At our being there it was held with a strong garrison, consisting of twelve companies of foot, two whereof were *English*, and two troops of horse, beside four companies of townsmen.

Breda.

May 21. we travelled to *Breda*, eight hours distant from *Bergen*, for so they reckon or measure their way in these countries, by the time they spend in passing it. This town is considerable for its bigness, well built and populous; of great strength, being encompassed with very thick walls and mounts of earth and two trenches full of water, the one broad and deep: at our entrance in we passed through two ports, and over five draw-bridges. It belongs to the Prince of *Orange*, who hath a castle and a fair palace in the town. Here are maintained in garrison for defence of this important strength thirteen companies of foot, two whereof were *English* at our being there, and four troops of horse. Ever since the surprize of this town by the turf-boat, it is the custom to search all boats laden with commodities that enter here, by stabbing them through in fundry places with a spit.

St. Gertrudenberg.

May 22. we travelled from *Breda* first to *St. Gertrudenberg*, belonging to the States, no great town, but well fortified and intrench'd, garrison'd by three companies of foot, one whereof was *English*, and a troop of horse: and from *Gertrudenberg* the same day by water to *Dordrecht* or *Dort*, a large city, very rich and populous, well built with tall houses of brick, not inferior to those of *Antwerp*. The streets elegantly pav'd, in

Dort.

the

the middle with stone, and on each side next the houses with brick set edgeways, so clean that a man may walk them in slippers without wetting his foot in the midst of winter. Thus paved and thus cleanly kept are the streets of all the cities and great towns in *Holland*. The *English* merchants have great privileges, and keep their court in this town. Here are two *English* churches and one *French*. From the tower of the principal church we had a fair prospect of the city and country adjacent, the steeple of *Breda* coming into view. In one of the upper rooms of the gunners doel or guild sat the synod assembled here, *Anno* 1611. The seats round about are still remaining.

May 23. we took places in one of the passage-boats *Rotterdam* that go off several times daily to *Rotterdam*, some three leagues distant from *Dort*, which brought us thither in five hours. *Rotterdam* is of a triangular figure, and much larger than I thought it to have been. It equals if not exceeds any city in *Holland*, except *Amsterdam* and and perhaps *Leyden*. It hath been lately much augmented by the addition of many streets of new buildings. Near the principal church dedicated to St. *Laurence* is a little house where *Erasmus* was born, over the door of which is placed his picture, and on one side of that this distich written,

*Ædibus his ortus mundum decoravit Erasmus
Artibus ingenuis, religione, fide.*

Under it in *Spanish* this,

*En esta casa es nacido Erasmo Theologo celebrado,
Par doctrina sennalado, la pura fee nos a revelada.*

And in *Latin* this,

*Fatalis series nobis invidit Erasmus,
At Desiderium tollere non potuit.*

In a large *Piazza* stands a stately brass statue erected to his memory, with the figure of a book of the same metal in its hand, and in the posture of turning over a

leaf, of which in drollery the people say, that, every time it hears the clock strike, it turneth over a leaf. The citizens of *Rotterdam* exercise no handicraft or manufacture to trade withal, but all their riches proceed from their sea-trade and merchandise. They have a very good port, ships of great burthen coming up in deep channels into the very town: where they lie secure from all danger, and lade and unlade their commodities at the merchants doors. The government is by a president, four burgo-masters, and twenty four magistrates or senators, which they call the *Vroetschap*. These chuse all publick officers out of their own number. Themselves continue in place during life, and when any one dies, the rest chuse out of of the citizens another into his room; so that the people have no interest or share at all in the government. The form of government is most what the same in all the other cities and towns of *Holland*, only the number of counsellors or the *Vroetschap* is in some more, in some less.

Delft.

Every hour of the day at the ringing of a bell goes off a passage-boat, somewhat like our pleasure-barges on the *Thames*, to *Delft*. We took places in one of these, *May 25*, which in two hours time brought us to *Delft*, three *Dutch* miles. This is also a large city, fair and well built, water runs through many of the streets. The stadthouse is a very handsome structure. Here are two large churches, the one called the old, the other the new kirk. In the middle of the choir of the new kirk is a stately monument erected to the memory of *Grave William of Nassau*, Prince of *Orange* (who was assassinated here) with this inscription:

D. O. M.

Et

Æternæ memoriæ

Gulielmi Nassovii,

Supremi Arausionensium Principis,

Patr. Patr.

Qui Belgii fortunis suas posthabuit

Et suorum.

Validissimos exercitus ære plurimum privato

Bis conscripsit, bis induxit;

Ordinum auspiciis Hispaniæ tyrannidem propulit:

Veræ

Moral, and Physiological.

23

Veræ religionis cultum, avitas patriæ leges

Revocavit, restituit :

Ipsam deniq; libertatem tantum non assertam

Mauritio Principi

Paternæ virtutis hæredi filio

Stabiliendam reliquit ;

Herois vere filii, prudentis, invicti :

Quem Philip II. Hisp. R. ille Europæ timor timuit,

Non domuit, non terruit ;

Sed empto percussore fraude nefanda

Sustulit.

Fœderat. Belg. Provinc.

Perenne memor. monum.

Fec.

In the choir of the old kirk is a monument to *Van Trump* with this inscription :

Æternæ Memoræ.

Qui Batavos, qui virtutem ac verum laborem amas,

Lege ac luge.

Batavæ gentis decus, virtutis bellicæ fulmen hic jacet, qui vivus nunquam jacuit, & imperatorem stantem mori debere suo exemplo docuit : amor civium, hostium terror, Oceani stupor, Martinus Harperti Trompius : Quo nomine plures continentur laudes quàm hic lapis capit sanè angustior. Et cui Schola Oriens & Occidens, mare materia triumphorum, universus Orbis theatrum gloriæ fuit : prædonum certa perniciēs, commercii felix assertor, familiaritate utilis non vilis, postquam nautas ac milites durum genus paterno & cum efficacia benigno rexit imperio, post L prælia quorum Dux fuit aut pars magna, post insignes supra fidem victorias, post summos infra meritum honores, tandem bello Anglico tantum non victor, certè invictus, x. Aug. Anno Æræ Christianæ MDCC LHI. Æt. LVI. vivere ac vincere desit. Fœderati Belgii Patres Heroi optime merito M. P.

C 4

Over

Over his Arms this written,

* i. e. Delphi.

* Phœbi
nimirum
seu solis.

* *Urbs Phœbi cineres jactat, sed * currus honores
Ingreditur quoties egrediturq; mari.*

One *Jean vander Mere*, an apothecary in this town, hath a *Musæum* well stored with natural and artificial rarities, which we viewed, and therein observed among other things the following particulars. *Zibetta* or the civet cat. *Dens Hippopotami*, as he pretended, though it be a question whether or no there be any such animal as the *Hippopotamus*; *Dentes Phocæ*, *Cornu Gazellæ*, of these we have since that seen in several cabinets. *Costa Sirenis dicta*, *Cornua birci Bezoardici*, *Cornua & Pedes Aleis*: this animal in *English* we call an *Elk*; I take it to be the same which in *New-England* and *Virginia* they call a *Moose*; it is of the deer-kind, the biggest and tallest of that genus. The horns have no brow-antlets, but only a broad palm with several snags upon it. I have seen one of these horns at Mr. *Holney's* an apothecary in *Lewis* that weighed 25 pounds. The skin of an *Elk* stuff'd we saw in the *Great Duke's* gallery at *Florence*. *Cornu cervi Americani*. The rattle-snake's skin. An elephant's tail, a very small thing considering the bigness of the animal. *Lacertus Indicus squamosus*. *Acus piscis 4 species*. A piece of a *Rhinoceros's* skin. At the anatomical theatre we saw the whole skin of a young rhinoceros stuff'd. The head of a dolphin. A giant's tooth, *si credere fas sit*. The head of a horned hare. A *chamæleon*. A *Soland-goose* out of *Groenland*. A *Tatou* or *Armadillo*. *Os petrosum Balenæ*. A young whale. A morse or sea-horse's head. *Guaina*, a fish from the island *Mauritius*. *Petim-buaba* or the tobacco-pipe fish. *Orbis Echinatus*. *Cancer Moluccanus ex novo Belgio*, which some call the sea-spider. *Corallium nigrum sive Antipathes*. *Spongia infundibuli specie*. *Mustela Africana*. Indian habits, an Indian saddle, several sorts of of Indian bread, Indian dice, several antient idols. The cup prince *William* of *Nassau* last drank out of. *Penicillum Sinense*. A *Japan* letter written to the *Dutch* governor, odly painted. *Passer Brasiliensis*. Several sorts of
Ternie's

Tomino's or humming-birds. A feather-garment from the streights of *Magellane*. *Siliqua arboris Jacciferæ*. *Nidus avis ex Surat*. *Cancer Americanus*. Many sorts of *Indian* tobacco-pipes from new *Belgium*. A dart from *Fretum Davis*, wherewith the natives kill fish. A locust of that sort that *St. J. Baptist* ate in the wilderness. *Onocrotali caput*. *Rostrum Rhinocerotis avis sive Corvi Indici cornuti* of *Bontius*, which is worth twelve florins at *Amsterdam*. A cassawaries or *Emeus's* egg. A pelican's skin and bill. Many sorts of *Indian* weapons from *Brazil*. Eggs of an *Indian* goose. *Cor Veneris* (a shell like a *Nerites*.) Star-stones from *Compostella*. Several *Indian* and exotick fruits and seeds. *Putorius Africanus*, with hairs spotted like the quills of a porcupine.

In this city is a chirurgical and anatomical theatre, where lectures are read every *Wednesday*, and several rarities preserved, as the skin of a young rhinoceros stuff'd, before-mention'd. *Lacertus squamosus* of a different kind from what we had before seen. *Manucodiatæ seu avis Paradisi nova species*. A flying squirrel. The skeleton of a dolphin. The tail of an *Indian* peacock. The head of an elephant. The horns of a hare. The head of a *Babiroussa*; it hath two long tushes on the lower jaw, and on the upper two horns that come out a little above the teeth, and turn up toward the eyes. In the entry below hangs a *Groenland* man in his boat, of which we have seen in several places, particularly in the *Trinity-house* at *Hull*.

This town is noted for good earthen ware, as stone-jugs, pots, &c. of which great plenty is made here. The government is by a prætor, two burgomasters, seven eschevins, and forty senators, which they call here, as in other towns of *Holland*, the *Vroetschap*.

May 28. We went by boat in an hour's time from *Delf Hague*. to the *Hague*, which, though not walled about, is rather a great city than a village. It hath fair streets, stately and beautiful houses, especially about the palace where the States sit. Near this town is a large grove full of pleasant walks; where we first observed *Monophyllum* growing wild in great plenty. At *Scheveling*, a village by the seaside, a mile from the *Hague*, we found a sort of *Spartum maritimum*, much taller and larger than our *English* kind.

From

From the *Hague* we made an excursion to a village called *Lausdun*, distant about an hour and half's riding, famous for the burial of the countess of *Zealand* and her 365 children. The two brass basins in which they are reported to have been baptized hang up still in this church, and over them this inscription, which contains the history.

*En tibi monstrorum nimis & memorabile factum,
Quale nec a mundi conditione datum.*

Margarita Hermannii Comitis Hennenbergiae Uxor, Quartii Florentii Comitis Hollandiae & Zelandiae Filia, Gulielmi Regis Romanorum ac postea Caesaris seu gubernatoris Imperii atq; Aletheiae Comitis Hannoniae Soror; cujus Patruus Episcopus Trajectensis, Avunculi autem filius Dux Brabantiae, & Comes Thuringiae, &c. Haec autem illustrissima Comitissa, annos quadraginta circiter nata, ipso die Parasceues, nonam circiter horam, Anno 1276. 365 enixa est pueros, qui prius à Guidone Suffraganeo Trajectensi omnes in duabus ex aere pelvibus baptizati sunt, quorum masculi quotquot erant Joannes, puellae autem omnes Elisabethae vocatae sunt, qui simul omnes cum matre uno eodemque die satis concesserunt, atque in hoc Lausdunensi templo sepulti jacent. Quod quidem accidit ob pauperculam quandam foeminam, quae ex uno partu gemellos in ulnis gestabat pueros, quam rem ipsa Comitissa admirata dicebat, id per unum virum fieri non posse, ipsamque contumeliose rejecit; unde haec paupercula animo perturbata atque perculsa, mox tantum prolium numerum ex uno partu ipsi imprecabatur, quot vel totius anni dies numerentur. Quod quidem praeter naturae cursum obstupenda quadam ratione ita factum est, sicut in hac tabula in perpetuam hujus rei memoriam, ex vetustis tam manuscriptis quam typis excusis Chronicis breviter positum & enarratum est. Deus ille ter maximus hac de re suspiciendus, honorandus ac laudibus extollendus in sempiterna secula. Amen.

May

May 31. We took places in one of the passage-boats from the *Hague* to *Leyden*, which brought us thither in three hours. These boats are drawn to and fro by horses. *Leyden* is next to *Amsterdam* I think the greatest city in *Holland*, and well built. In the great church dedicated to *St. Peter*, are many monuments set up to the memory of persons eminent for learning, as *Heurnius* the famous physician, *Bontius*, *Tho. Expenius*, *Rembertus Dodonæus*, *Antonius Thysius*, *Festus Hommius*, *Everardus Bronekhorst*, and others, their inscriptions you may find in *Hegenitius's Itinerarium Hollandiæ*. In the *French* church lie buried *Joseph Scaliger*, *Carolus Clusius*, *Willebrordus Snellius*, and *Joannes Polyander à Kerckhove*.

The schools are one pile of building of brick, three stories high, containing two rooms on a floor. The lower two are the divinity and physick schools. The middle the law and philosophy schools. The uppermost or garrets are the *Officina Elzeviriana*. The following *Series Lectionum* (of which sort there is one yearly printed and affixed to the school-gates) will give an account, what were the names of the professors in each faculty at the time of our being there. and what books and at what hours they read.

Rector & Senatus Academiæ Lugduno-Bat. Lectori Salutem.

CUM in constitutione Academiarum nihil magis spectetur, quam *Lectionum series*, quæ in omni *Facultate* hybernis & æstivis temporibus habentur: visum nobis fuit, ut de his non nostris tantum, sed & exteris constaret, brevem indicem earum, & tabellam quasi dare: ut qui *Academiæ* hujus nostræ celebritatem apud alios commemorari audiunt, quid in ea doceatur, intelligant, priusquam ad eam accedant: aut potius ut accedant, cultumq; animi in ea percipiant.

Ordo

Ordo LECTIONUM Æstivarum in Academia
Batava Leidenſi. Anno 1663.

MANE.

HORA OCTAVA.

D. Joannes van Horne, *Anat. & Chir. Profeſſ. ord. in
Inſtitutionibus Medicinæ prælegit Methodum Medendi.*

HORA NONA.

D. Joannes Cocceius, *SS. Theol. Doct. & Profeſſor, E-
piſtolam Pauli ad Philippenſes ſuccinctè explicat.*D. Albertus Ruſius, *J.U.D. & Prof. Inſtitutiones Juris
interpretatur.*D. Jacobus Golius, *Prof. Matheſeos, Elementa Aſtrona-
mica exponit.*

HORA DECIMA.

D. Abrahamus Heidanus, *SS. Theol. Doct. & Profeſſor,
locos communes proſtitetur.*D. Daniel Colonius, *J.U.D. & Profeſſor, Academia à
Secretis, Codicem interpretatur.*D. Adolſus Vorſtius, *Med. Doct. & Profeſſor prima-
rius, interpretatur Aphoriſmos Hippocratis.*D. Henricus Bornius, *Philosophiæ Profeſſor, Studiorum
Celiſſimi Arauſionenſium Principis Ephorus, Ethicam pro-
ſtitetur.*D. David Stuartus, *L.A.M. SS. Theol. Doct. & Phi-
loſophiæ Profeſſor Logices Præcepta & Quæſtiones illuſtras
Metaphyſicas, alternis interpretatur.*

HORA UNDECIMA.

D. Joh. Antonides vander Linden, *Doct. & Profeſſor
Medicinæ Præctiæ primus, Morbos particulares cognoscendi
& curandi methodum juxta Rationalis Medicinæ præcepta
tradit.*

D. Anto-

Moral, and Physiological.

29

D. Antonius Thyfius, J. U. D. & Eloquentiæ Professor, Illustriss. & Præpot. D.D. Ordinum Holland. & West-Fris. Historicus, & Bibliothecæ publicæ præfectus, ad Pomponium Melam memorabilia totius terrarum orbis exponit. Diebus autem Mercurii & Saturni Jus publicum interpretatur.

A M E R I D I E.

H O R A P R I M A.

D. Jacobus Golius, in Arabicis Alcoranum interpretatur, & ubi opus est refutat.

D. Johannes Fredericus Gronovius, J. U. D. & Linguae Græcæ Græcarumque Historiarum Professor, alternis Herodianum & Historiam Romanam recitabit.

H O R A S E C U N D A.

D. Johannes Hornbeek, SS. Theol. Doctor & Professor, librum Moſis explicat, Leviticum.

D. Adrianus Beeckerts à Thienen, J. U. D. & Professor, Acad. in præſens Rector, Pandectas interpretatur.

D. Franciscus de le Boe, Sylvius, Medicinæ Præcticæ Professor, Affectus graviores, frequentiusve in Praxi Medicæ obvenientes tractat.

H O R A T E R T I A.

D. Allardus Uchtmannus, Hebr. Ling. Professor, Pentateuchi capita selecta & difficiliora interpretabitur in Genesi, & Hebræam Grammaticam.

D. Georgius Hornius, Historiarum Prof. alternatim C. Tacitum & Historiam Universalem interpretatur.

H O R A Q U A R T A.

D. Stephanus Marchant, J. U. D. & Prof. Institutiones Juris interpretatur.

D. Joannes de Raei, L. A. M. Medicinæ Doctor & Philosophiæ Professor ordinar. profitetur Physicam.

D. Adolfus

OBSERVATIONS Topographical,

D. Adolfus Vorstius, *Medicinæ & Botanices Professor primarius*, Plantas in Horto Acad. demonstrat.

D. Petrus à Schooten, *Math. Prof. Belgicus*, Fortificationem exponit, deinde Perspectivam, tum communem, tum curiosam, ejusque in Cosmographiâ & Gnomonicis usum scientificæ est explicaturus: Hora undecima loco solito.

D. Johannes Antonides vander Linden, *Med. Practicæ Professor primus*, alternis trimestribus in publico Nosocomio Studiosos Medicinæ singulis septimanis aliquoties in ægrotorum visitationibus, & morborum, qui sese offerunt, cognoscendi atque curandi ratione instruit, causasque mortis in cadaveribus dissectis ad oculatam, quantum fieri potest, fidem demonstrat.

D. Franciscus de le Boe, Sylvius, *Medicinæ Practicæ Professor in Nosocomio publico trimestribus alternis, diebus singulis, exceptis Dominicis*, Studiosos Medicinæ in Morborum dignotione per sua signa, cognitione per suas causas, curatione per sua indicata exercet, atque sic ad praxin manuducit. Quicquid autem de partibus verè affectis & causis affectuum latentibus capi sensibus potest, id omne in demortuorum sectione rimatur & patefacit.

Exercitia Anatomica publica fient mensibus Hybernis à D. Joanne van Horne, *Anatomes & Chirurgiæ Professore Ordinario*.

D. Antonius Thysius, *Eloquentiæ Professor*, Collegium Oratorium publicum instituit.

D. Henricus Bornius, *Philosophiæ Professor*, Studiorum Celsissimi Arausionensium Principis Ephorus, in omni Philosophiæ parte Collegia habet & Disputationes, ac in illustr. V. H. Grotii lib. de Jure Belli ac Pacis Exercitationes instituit.

D. Johannes Fredericus Gronovius Græcæ Linguae & Græcarum Historiarum Professor, Græcos & Latinos auctores antiquos, quos studiosi desiderabunt, privatis Collegiis interpretabitur.

Ex Autoritate publica, diebus Mercurii & Saturni, Georgio Hornio Collegii Oratorii publici Præside, in omnis generis & illustris argumenti Orationibus, ut & disputationibus Politicis habendis, publicè exercere se possunt, quotquot illis studiis operam suam addixerunt.

D. David

D. David Stuartus Philosophiæ Professor Collegia Explicatoria, Examinatoria & Disputatoria per totam Philosophiam auspicatur ter in anno, mense videl. Sept. Jan. April. eaque trimestri constanter absolvit; ut Academica juventus Philosophiæ stadium sæpius decurrat anni spatio. Disputationes etiam publicas de illustribus materiis habet, cum præsto sunt Respondentes, singulis septimanis.

Adjoining to the school-yard is the *Physick garden*, a square of less than an acre of ground, but well stored with plants, of which there have been at sundry times several catalogues printed. Here are no colleges for students to live in, as in our universities (excepting two of the nature of hospitals, for the maintenance only of poor scholars) but the students live in private lodgings in the town, where they can best provide themselves. No scholastical habits, as gowns or caps, worn by any of the students, but they walk up and down, come to the schools, and perform their exercises in cloaks. The professors when they read lectures, or preside at disputations, wear gowns. No capping professors, or university-officers in the publick schools, but all the students are covered both at lectures and disputations, not only in this university, but in all the universities we have been at beyond the seas. If any desire to be admitted of the university, they go to the *Rector magnificus*, who gives them each a seal, and then they are freed from paying excise. The students usually list themselves under some professor, who reads to them in private, running thro' a whole faculty, which they call *Collegium instituere*, and for this they give a gratuity to the professor. In conferring degrees, here is no respect had to standing. When any one intends to commence in any faculty, he makes *Theses* upon the subject he intends to answer, which *Theses* are printed, and these he is obliged to defend against all opponents. The respondent hath his seat under the professor's, as in our schools: for the opponents there is no particular seat, but in any part of the schools where they happen to be, they arise, and there stand and oppose, first asking leave of the professor that presides at the act. Any one that pleases may oppose with the professor's leave. *Liberalium Artium Magister* and Doctor are

OBSERVATIONS Topographical,

are the only degrees conferred here. Each of the professors have 200 or 300*l.* *per ann.* stipend allowed them by the States.

The chief trade of this city is cloathing. The roofs of the houses are more steep than ordinary, made so on purpose to cast the rain-water into a channel or trough, which conveys it into a large cistern, where it is kept for the uses of the house. Great channels of water pass thro' many of the streets. On the tower of the Stadt-house stands a watchman, who blows a trumpet every hour, and if any fire happens, he sounds an alarm. Below stands a guard of thirty armed soldiers, and at each port ten. Every hour of the night a man goes about the streets, and making a noise with a rapper, tells with a loud voice what of the clock it is. In the anatomical theatre are preserved many skeletons of men and beasts, skins of beasts, parts of exotick animals, and other rarities. We noted a horned beetle from the *East-Indies*; an *Armadillo*; petrified mushrooms; *Lapis ceraunias*; *Caput Porci fluvialis* à *Brasilia*; *Ala Hirundinis marinæ ex Oceano Orientali*; *Grammari Æthiopici*; *Thus fossile Moravicum*; *Capsula Chinenfis cum capite animalis partim cervinam, partim porcina naturam repræsentante ex insula Celebes Indiæ orientalis*; *Niduli crustacei ex cautibus regni Jehovæ, quæ à Chinenfis in deliciis habentur*, these we saw afterwards in *Kircher's Musæum* at *Rome* and elsewhere; *Folium betle sive siri*, it resembles the great satyrion leaf: of these leaves and the fruit of the tree *Arek*, mingled with a little chalk, is made the Indian *Betle*, which is very stomachical, and a great regale at visits. *Faba Ægyptia sive Bonamicia*; elephants skulls; *Guandar formicas vorans*, or the ant-bear; *Myrenceter*, bigger than an otter, having a very long snout, long crooked claws, coarse bristly hair, and a long brush tail; *Grallæ sive calopodia Norvegica*; a fish with two feet; *Capriscus Rondeletii*, *Tigris capta in Jacatra regno*. In the publick library are preserved the manuscripts of *Joseph Scaliger*, and *Libri Orientales quos Vir. Cl. Jacobus Golius impensis publicis ex Oriente huc advexit*. This town is well walled and trenched about, encompassed with pleasant walks of lime-trees. He that desires more particular information concerning the university and publick buildings

ings of the city, &c. may consult *Meursius's Athenæ Batavae*, and *Hegenitius's Itinerarium Hollandiæ*.

Before we left *Leyden*, we made a bye-journey to *Se. Sevenbuys*. *venbuys*, a village about four leagues distant, to see a remarkable grove, where, in time of year, several sorts of wild-fowl build and breed. We observed there in great numbers (1.) *Scholfers*, i. e. *Græculi palmipedes*, in *England* we call them *Shags*, they are very like to cormorants; only less. We were much surpris'd to see them, being a whole-footed bird, alight and build upon trees. (2.) *Lepelaers*, called by *Gesner Plateæ sive Pellicani*, by *Aldrovandus Albardeola*, we may term them in *English* spoon-bills. (3.) *Quacks*, or *Ardea cinerea minores*, the *Germans* call this bird the *Night-raven*, because it makes a noise in the night; *Nocte clamat voce absona & tanquam vomituriens*. *Gesner*. (4.) *Reyers*, or herons. Each sort of fowl hath its several quarter. When the young are ripe, they who farm the grove, with an iron hook fastened to the end of a long pole, lay hold on the bough on which the nest is built, and shake the young ones out, and sometimes nest and all down to the ground. Besides the forementioned birds, there build also in this wood *ravens*, *wood-pigeons*, and *turtle-doves*. This place is rented for 3000 guilders per ann. of the baron of *Pelemborg*, who lives at *Lovain*, only for the birds and grass. By the way to this place we observed in the ditches *Lythymachia lutea flore globoso*, and *Arum sive Dracunculus aquaticus*. All the country about *Sevenbuys*, towards *Leyden*, is a flat or fenny level, full of shallow pools of water; there we observed their manner of making turf. They rake or fish up mud from the bottom of the water with a net like a hoop-net, fastened to the end of a pole, and fill therewith a flat-bottomed boat. Out of the boat they throw this mud with a long shovel, or scoop, on an even piece of ground; making of it a bed of an equal thickness so near as they can; there it lies to drain and dry: after a while they tread it with broad boards fastened under their feet to make it close and smooth. When it is moderately dry, they cut the whole bed with a kind of spade into pieces, of the bigness of a brick. These they pile up in small conical stacks,

or long ranks, laying the turves so, that a man may see thro' the stacks, and the wind blow thro' them, to be further dried. At last they house them in barns that are thatch'd, the sides not walled up close, but made of wooden bars set at a little distance one from another.

Haerlem.

June 6. We took boat for *Haerlem*, where we arrived at four hours end. This is a large, populous, and pleasant city, strongly walled and intrenched. Water is brought thro' many of the streets. Without the walls, towards *Leyden*, are pleasant groves. In the summer-house in the garden of the Prince's court here, is a picture of *Laurentius Costerus*, in a furred gown, holding the Letter A in his hand, and this inscription over it,

M. S. Viro Consulari, Laurentio Costero Harlemensi alteri Cadmo, & Artis Typographicae circa Annum Domini MCCCCXXXX Inventori primo.

His statue, and the inscription on his house in the market-place, mentioned by *Hegenitius*, we could not find, being, as we were told, lately bought and removed thence. The butchery of this town is a handsome building, and covered with lead, which we thought not unworthy the notice-taking, it having been the first publick building that we saw so roof'd since we left *England*. The citizens here drive a great trade of weaving, as well silks, *v.g.* damask, velvet, sattin, taffaty, &c. as linnen cloth, tiffany, holland, &c. On the sea-coast near *Haerlem*, and all along *North-Holland*, are great sandy hills or downs, which are a great defence to the country hereabout against the incroachments of the sea.

Amsterdam.

June 8. From *Haerlem* we boated to *Amsterdam*, two hours distant. About the mid-way we passed by two great meers, where we changed our boat. At the port of *Amsterdam* stand two armed soldiers, one within, the other without. This is the greatest city in all the *Low-Countries*, and one of the richest and best traded empories of the whole world. At our being there, we judged it to be about the bigness of *Venice*, and lesser than one half of *London*; but they had then taken in, and inclosed with a substantial wall and trench, a great space of

of ground, wherein they had designed and set out streets, with intention to make their city, for bigness also, comparable with the best of *Europe*, *London* and *Paris* not excepted. I hear since, that this void ground is filled with rows of stately and beautiful houses. The publick buildings we especially took notice of were, (1.) The new *Stadthouse* lately erected, the old one having been burnt down to the ground in three hours space (as we were told) *June 7. 1651.* but (as I find it in the printed description of *Amsterdam*) in *July 1652.* This is a magnificent pile of building, of a square figure, large and tall. The outside, or facing of the walls round about, is of free-stone, the body of the walls of brick. It is reported, that the foundation of this structure under ground cost as much as the superficies above ground, viz. 100000*l.* sterling. The Describer of *Amsterdam* saith, that it standeth upon 13659 great masts, or piles, driven into the ground. (2.) The *Burse*, or *Exchange*, like our old *Royal-Exchange* at *London*, but not a perfect square, being longer than it is broad. The first stone of this building was laid *May 29, 1608.* and the first meeting of the merchants there *August 1, 1613.* Merchants of all nations resort thither, but of all strangers, the *Jews* are the most numerous, who fill one walk. (3.) The *Admiralty-house*, a handsome building with fair rooms. (4.) The *Magazine*, and (5.) the several *Hospitals* and houses of correction. In this city is an *Athenæum*, or *Schola illustris*, in which are maintain'd six professors, who read publick lectures in several faculties in summer-time. Here is also a publick *Physick-garden*. The *Jews* are here allowed the free and open exercise of their religious worship. They live together in one quarter of the city, and are said to be in number about 20000 souls. They are in better condition, and richer, than in most places where they are tolerated. They are, for the most part, of a dark, or tawney complexion, and have black hair. Not only the *Jewish*, but all other religions, the *Romish* not excepted, are here tolerated. But if any, beside those of the State-religion build churches, they are prohibited to erect steeples, or make use of bells for the assembling of the people. In the new church

is a handsome monument to *John van Galen*, with this inscription:

Generosissimo Heroi

Johanni à Galen

Essensi

Qui ob res fortiter & feliciter gestas, sexies uno anno Dunckerckanorum Prædatorum navem captam, & à Barbaris opima spolia reportata, Ordinum Classi in Mari Mediterraneo Præfectus memorabili prælio ad Livornam, Deo auxiliante, Anglorum navibus captis, fugatis, incendio & submersione deletis, commercium cum dicti maris accolis restituit, idibus Martii, A. CIO IOC LIII. Et altero pede truncatus, nono die post Victoriâ, annos XLVIII obiit, ut in secula per gloriam viveret.

Illustriss. & Præpotent. Fœderati Belgii

Ordinum decreto,

Nob. & Pot. Senatus Archithalass.

Qui est Amstelodami

M. H. P.

In this church is a stately pulpit, said to have cost 1000 l. sterling the building. We were told that in this city there were 24 ministers pensioned by the States.

The government of Amsterdam.

The government is by a scout or prætor, four burgomasters, nine scabins, and thirty-six counsellors or senators, which they call the *Vroetschap*. The scout is stadtholder of *Holland*, and hath the first place in the bench of *scabins*. He is chosen to this office by the *burgomasters*, with the consent and approbation of the *Vroetschap*, for three years: tho' he may continue in office six or more, if they see good. He must have been a freeman at least seven years before he be chosen. His office is with the *burgomasters* and *scabins*, to make laws and constitutions: to apprehend and imprison all malefactors within the liberties of the city. He, as chief judge in civil as well as criminal causes, hears the pleadings, and with consent of the *burgomasters* and *scabins* pronounces sentence, condemning the guilty to death, if the cause require, and taking care that the sentence be executed. In other cities, the prætor hath to do only in criminal causes, being

being no more than the commonwealth's solicitor, or publick accuser and prosecutor of malefactors.

The number of *burgomasters* is twelve, whereof four are *regent* yearly. They must not be under forty years of age. Every year, by the major vote of all the *burgomasters* that have ever been *scabins*, three out of the twelve are chosen to be regents, which three newly elect take to themselves a fourth out of the three chosen the year before, who gives the three new ones their oaths, and hath the precedency the three first months. Out of the other eight are other officers chosen, as treasurers, masters of hospitals; one for the convention of the States at the *Hague*, one for the council of the admiralty in *Amsterdam*, &c. The *burgomaster's* office is to govern the city, to arbitrate differences between man and man, to take care of the streets, walls, houses, publick buildings, &c. When one of the twelve dies, another is chosen into his room by the *Vroetschap*. As for the *scabins*, the *Vroetschap* chuse fourteen persons, out of which the *burgomasters* take seven; but so that none of them be near of kin to the *scout*, or the *regent burgomasters*. To these seven, the new and old *burgomasters*, with the new chosen *scabins*, do by most voices add two out of the seven that were chosen the last year; the which two for that year are the first and second presidents. The *scabins* are judges in all causes civil and criminal.

The council of thirty-six, or *Vroetschap*, continue in place during life, and when one dies, the rest chuse another into his room, but none under twenty-five years of age. This council chuses the fourteen *scabins*, and is assembled upon important occasions by the *burgomasters*, for their advice and direction in the weighty affairs and concerns of the city. The supreme power seems chiefly to rest in these.

Formerly none was capable of being *burgomaster*, except his father had been a freeman a year and six weeks before he was born; but of late they have made a constitution, that he, who will pay five hundred guilders, may be made free of the city, and capable of being *burgomaster* after seven years. Any one may be made a freeman for fifty guilders, but then he shall never be capable of being chosen *burgomaster*.

The Describer of *Amsterdam* saith, that there were in that city 18 years ago 54000 houses, whereas in *Paris*, there were then but 46000, which is a thing by no means to be credited.

The militia of *Amsterdam* consists of 54 companies, divided into five regiments, each containing eleven companies, and every company consisting of 150 men, so that the whole amounts to 8250. Two companies watch every night for the guard of the city.

Utrecht.

June 16. We took boat for *Utrecht*, where we arrived at six hours end. This is a great town, and the head of a province, environed with a thick and high wall, and a deep trench. The streets and buildings far short of the elegance, beauty and cleanliness of those in *Holland*, much like the houses and streets of our *English* towns. Water runs thro' many of the streets in deep channels. The *domo*, or cathedral church, hath a great tall tower, ascended by 460 steps, from whence we had a fair prospect of the city and country round about. Here is an university erected by the States of the united provinces, in the year 1636. Who were the professors in each faculty at the time of our being here, the following *Series Lctionum* will acquaint the reader.



Series

*Series Lætionum in Acad. Ultra-
jectina, Anno Christi M.DC.LXIII.
Priore Semestri.*

MANE, HORA OCTAVA.

D. Antonius Matthæus, J. U. D. & Professor, diebus Lunæ & Martis Institutiones, Jovis autem & Veneris Selectiores Pandectarum titulos interpretabitur.

D. Regnerus à Mansvelt, Philosophiæ Doctor, Logices & Metaphysices Professor, diebus Lunæ & Martis Logicam cum quæstionibus Metaphysicis; Jovis vero & Veneris, Naturalem Theologiam docebit.

HORA NONA.

D. Cyprianus Regnerus ab Oosterga, J. U. D. & Professor, Codicem Academicâ & Forensi explicatione explanabit.

D. Henricus Regius, Eques Auratus & Medicinæ Professor Primarius, suos Medicinæ Medicationumque libros interpretabitur; & diebus Veneris Stirpium demonstrationes in Horto Publico instituet.

D. Daniel Berckringer, L. A. M. & Philosophiæ Præcticæ atque Eloquentiæ Professor, diebus Lunæ & Martis Institutiones suas Ethicas, Jovis vero & Veneris Politicas, cursoriè interpretabitur.

HORA DECIMA.

D. Gisbertus Voetius, SS. Theologiæ Doctor & Professor, diebus Jovis & Veneris perget in explicatione Politicæ Ecclesiasticæ, diebus vero Lunæ & Martis, in Explicatione prioris partis Locorum Communium.

D. Isbrandus de Diemerbroeck, Med. Doct. ac Medicinæ Præcticæ & Anatomies Professor, diebus Lunæ & Veneris in Academia explicabit Historias morborum ca-

OBSERVATIONS Topographical,

pitis, quibus absolutis, perget ad Historias morborum thoracis, diebus Martis & Jovis in Nosocomio decumbentes ægrotos inviset, eorumque examen & medicationem docebit, ac praxeos specimina exhibebit. Demonstrationes verò anatomicas in theatro publico instituet, quum subjeſti humani copia dabitur.

HORA UNDECIMA.

D. Andreas Essenius, S. Theologiæ ac Philosophiæ Doctor, illius Professor, diebus Lunæ, Martis & Jovis Controversias tractabit ad selecta loca V. T. Veneris quoque Historiam Ecclesiasticam sæculi Christiani duodecimi, enarrabit.

D. Johannes Georgius Grævius, Philosophiæ Doctor, Historiarum & Eloquentiæ Professor, diebus Lunæ, Martis & Jovis explicabit D. Taciti Annales, diè verò Veneris Ciceronis orationem pro Milone,

A MERIDIE, HORA PRIMA.

D. Paulus Voet, J. U. D. & Professor, Juris Pandectas continuatâ serie, interpretabitur.

D. Johannes Leusden, L. A. M. & Linguae Sanctæ Professor, diebus Lunæ, Martis & Jovis explicabit Psalmos Hebraicos; diebus vero Veneris interpretabitur Rabbinum aliquem, vel selectos & difficiliore 564 versus Psalterii, in quibus omnes ejus voces & pleræque radices V. T. continentur. Post explicationem textualem semper addet quæstiones Philologicas, concernentes Philologiam Hebraicam, Controversias & Ritus Judæorum & quidem eo ordine, quæ post invicem describuntur in Spicilegio Philologico.

HORA SECUNDA.

D. Franciscus Burmannus, SS. Theologiæ Doctor & Professor, diebus Lunæ & Martis Evangelistam Matthæum cum necessariis quæstionibus & observationibus, quæ poterit

terit brevitate, enarrabit; diebus vero Jovis & Veneris Oeconomiam salutis humanæ sub Fœdere Vet. ac Novo tractabit.

D. Johannes de Bruyn, L. A. M. Physicæ & Mathematicos Professor, & p. t. Academiæ Rector, diebus Lunæ & Martis in Physicis lectionibus perget; Jovis vero & Veneris continuabit explicationem fundamentorum Mechanicorum.

De Heer Hugo Ruys, sal Woensdaeghs en Saterdaeghs van Elf tot Twaelf uyren inde Fortificatie continueren.

The garrison consisted of eight companies of soldiers, whereof one was *English*. The government is by an upper and under Scout, and four burgomasters, whereof two new chosen yearly.

June 18. We went by boat to *Vianen*, passing over a branch of the river *Rhine* called the *Lech*. This is a privileged town, wall'd and trench'd about, subject to the lord of *Brederode*. Here we noted an engine or wheel for the weaving of inkle and tape, which moves many shuttles at once. The same day we travelled on to *Leerdam*, three hours distant from *Vianen*, a small considerable town, belonging to the Prince of *Orange*.

June 19. We passed through *Asperen* a small wall'd town, and further on ferried over the river *Wale* (*Vaal* in *Latin*) to a pretty pleasant wall'd town, called *Bommel*, standing in an island.

Bommel.

Here lay in garrison four companies of soldiers, whereof one of *Scotchmen*.

Not far from hence we ferried over the *Mose*, and passed by a strong fort nigh the water called *Creve-Coeur*, and not much further another called *Engelen*; and after four hours came to the *Bosch*, *Hertogenbosch* the Dutch call it, and the French *Bois le duc*, i. e. *Sylvia Ducis*. Before we entered the town, we passed through a water and over two draw-bridges. This place is situate on a hill in the midst of a low fenny level of a great extent, the greatest part whereof is (at least now was) covered with water, so that the only avenues to the town are upon artificial causways. It is encompassed with a strong wall and a deep trench. At one end stands a citadel.

tadel strongly fortified, which commands the town. By reason of its situation and fortifications one would judge this place impregnable, yet hath it been taken in the late wars. At our being there were kept in garrison for the defence of this important strength 21 companies of foot and four troops of horse. In the choir of St. John's church are painted the arms of many of the knights of the golden fleece, and over the upper stalls or seats this written in *French*, *Le tres haut & tres puissant Philip, dit le bon, &c.* which because it contains the history of the author's first institution and model of this order, I thought fit to translate into *English*, and here set down.

"The most high and mighty Prince *Philip* called the
 "Good, by the grace of God duke of *Burgundy*,
 "Lorrain, and *Brabant*, in the year 1429. in the city
 "of *Bruges*, did, in imitation of *Gideon* create and in-
 "stitute to the honour of God and the *Virgin Mary*,
 "and for the sake of St. *Andrew* protector and patron
 "of *Burgundy*, a company or society of honourable
 "knights, into which might be received Emperors,
 "Kings, dukes, marquesses, and other personages, as
 "well of his own subjects as of foreign countries,
 "provided they were of noble blood and good fame:
 "and called these great persons, *Knights of the Golden*
 "*Fleece*, to whom he gave, for perpetual chief, him
 "that should be lawful duke of *Burgundy*, and have
 "the seignoury or lordship of the *Low-Countries*; li-
 "miting their number to 24, comprehending also the
 "chief. And for occurrences and use of the order
 "he created four honourable officers, *viz.* a chan-
 "cellor, a treasurer, a secretary, and a king of arms.
 "And for the establishment and well regulating of this
 "order he made notable statutes and ordinances". The
 houses of this town are of a different make from those
 of *Holland*, the outside being covered with boards,
 like those of *Edinburgh* in *Scotland*. We observed great
 store of wild fowl to frequent the waters hereabout;
 and found growing wild *Herniaria hirsuta* on the
 sandy and gravelly banks.

June 20. We took a waggon drawn by three horses abreast, as is usual in these countries, which in six hours time brought us to *Eindhoven*, a small wall'd town; *Eindhoven.* and thence in four hours more to *Haumont*, a pitiful walled town belonging to the bishop of *Liege*. *Haumont.* June 21. Three hours riding brought us to another little wall'd town called *Bry*; the houses whereof were old and decaying. *Bry.* Between *Haumont* and this place, we rode over heaths of great extent, called the *Champagne*. We then left the level country and ascended some hills, from whence we had a pleasant prospect of the *Mos* and *Maastricht*, *Maastricht.* where we arrived this evening, though it be accounted seven hours distant from *Bry*. This city is fortified with good outworks, besides a strong wall and trench, garrisoned with 31 companies of foot, and six troops of horse, it being a great town and a frontier. Half of the magistrates are *Protestants*, and half of the *Romish* religion. The greater part of the citizens *Romanists*. There are in town near 20 cloisters or monasteries of both sexes; and they have the free and publick exercise of their religious worship. For the *Protestants* there are three *Dutch* churches, and one *English* and *French*, which those nations use alternately. The old buildings of this city are like those of the *Bosch*; but since the States have been masters of it, it is become a rich and thriving place, and they are building fair new brick'd houses apace. They were also setting up a large stone stadthouse, of a square figure, resembling that at *Amsterdam*. The river *Meuse* divides the city into two parts, which are joined together by a broad stone-bridge of nine arches. The lesser part over the water is called *Wick*. The garrison-soldiers are all *Protestants*.

The common people of *Holland*, especially inn-keepers, waggoners (foremen they call them) boat-men and porters are surly and uncivil. The waggoners bait themselves and their horses four or five times in a day's journey. Generally the *Dutch* men and women are almost always eating as they travel, whether it be by boat, coach, or waggon. The men are for the most part big-boned and gross-bodied. The first dish at ordinaries and entertainments is usually a *salade*, *Sla* they call it, of which they eat abundance in *Holland*. The meat they com-

The manners and particular customs of the *Low-Dutch*.

commonly stew, and make their *Hotchpots* of it. Puddings neither here nor in any place we have travelled beyond sea do they eat any; either not knowing the goodness of the dish, or not having the skill to make them: *Puddings* and *Brawn* are dishes proper to *England*. Boil'd spinage minc'd and butter'd (sometimes also with currans added) is a great dish all over these countries. The common people feed much upon *Cabliau* (that is cod-fish) and pickled herrings, which they know how to cure or prepare better than we do in *England*. You shall seldom fail of hung beef in any inn you come into, which they cut into thin slices and eat with bread and butter, laying the slices upon the butter. They have four or five sorts of cheese, three they usually bring forth and set before you. (1.) Those great round cheeses, colour'd red on the outside, commonly in *England* called *Holland-cheeses*. (2.) Cummin-seed cheese. (3.) Green cheese, said to be so colour'd with the juice of sheep's-dung. This they scrape upon bread butter'd, and so eat. (4.) Sometimes *Angelots*. (5.) Cheese like to our common country cheese. Milk is the cheapest of all belly-provisions. Their strong beer (thick beer they call it, and well they may) is sold for three stivers the quart, which is more than three pence *English*. All manner of victuals, both meat and drink, are very dear, not for the scarcity of such commodities, but partly by reason of the great excise and impost wherewith they are charged, partly by reason of the abundance of money that is stirring here. By the way we may note, that the dearth of this sort of provisions is an argument of the riches of a town or country, these things being always cheapest in the poorest places. Land is also here sold at 30 or 40 years purchase, and yet both houses and land set at very high annual rents: so that, were not the poor workmen and labourers well paid for their pains, they could not possibly live. Their beds are for the most part like cabbins, inconveniently short and narrow; and yet such as they are, you pay in some places ten stivers a night the man for them, and in most six. There is no way for a stranger to deal with inn-keepers, waggoners, porters, and boat-men, but by bargaining with them before-hand. Their houses in *Holland*

land are kept clean with extraordinary niceness, and the entrance before the door curiously paved with stone. All things both within and without, floor, posts, walls, glass, household-stuff marvellously clean, bright and handsomely kept: nay, some are so extraordinarily curious, as to take down the very tiles of their pent-houses and cleanse them. Yet about the preparing and dressing of their victuals our *English* housewives are, I think, more cleanly and curious than they; so that no wonder *Englishmen* were formerly noted for excessive eating, they having greater temptation to eat, both from the goodness of their meat, and the curiosity of the dressing it, than other nations.

In the principal churches of *Holland* are organs, which usually play for some time after the sermon is done. The collections for the poor are made in sermon-time, a purse with a bell hanging at the bottom of it, and fastened to the end of a pole, being by the collector reach'd to every one. The psalm to be sung is mark'd upon slates, which are hung up and down the churches. The people of these countries buy and sell small commodities, and travel by waggon or boat upon the Lord's days. Their travelling waggons are some cover'd and some open: few travel on horse-back. No beggars to be seen in all *Holland*, care being taken to set on work all that are able, and provision made for the aged and impotent. There are in this one province of *Holland* three or four and twenty wall'd towns and cities, and six of these, at least, beside *Amsterdam*, bigger than any we have in *England*, except *London*; and *Amsterdam*, by this time, well approaches to the bigness of *London*.

To these I shall add some observations concerning the *Low-countries*, made by my much honoured friend *Francis Barnham*, Esq; deceased, at his being there in the retinue of my lord ambassador *Holles*.

In all the cities and towns of note throughout the *United Netherlands* there is a continual watch kept night and day upon the highest steeple, for the more ready and speedy discovery of fires, or other things of a surprising nature, which we have already noted in our description of the city of *Leyden*.

All

All differences arising between skippers and foremen, &c. are decided by casting the dye: this we often observed them to do, when several of them strove who should carry us.

The rain that falls upon the houses is by pipes and gutters conveyed into a cistern, and there reserved for the uses of the house, as at *Venice* in *Italy*. This particular we have also before taken notice of in the description of *Leyden*.

The generality of the *Dutch*, from the better sort to the meanest, do much dread their superiors; I think the cause is, because, upon complaint made, there is speedy care taken to do justice. The generality of the people, of all sorts, are strangely given to the humour of running up and down to see any new or strange thing. The common sort have any thing that is rich or gay in great admiration, insomuch that, when my lord *Holles* made his entry into *Breda*, the coronets that were on the top of his coach were talk'd of with wonder all the country over.

The people universally are great lovers of money, very covetous and greedy of gain, yet in their bargains punctual and just. The knowledge of most of them extends no further than the arts of getting money, and an ability to talk of state-affairs, wherein you shall meet with mean persons very well seen: I think the reason may be, because the lowest of them is not without hopes of coming to be a burger, and at last one of the States.

I cannot allow the *Low-Dutch* to be of a valiant and courageous temper generally, notwithstanding they fight so well at sea; for the constitution of their bodies which is phlegmatic, and the temperature of the air which is moist, and their diet which is gross and foggy, forbid it.

Yet there are few or none in these countries that die of consumptions.

There is liberty of all religions and professions, but abundance of spies to watch them, that they disturb not the publick peace.

I think it harder to be a traitor under the government of *Holland*, than under any other kingdom or state, because they seem to be more watchful and suspicious.

The

The people say and print what they please, and call it liberty.

The better, much more the worse, fort have little sense of honour, governing themselves more by the rules of profit and advantage, than of generosity and *Decorum*.

Murder is not prosecuted with so much diligence and concern as felony or theft.

The times of the day for marriages and burials are limited, but with difference in respect of places: for at *Breda* they must bury their dead before 12 of the clock, and at *Amsterdam* not till the afternoon.

When any famous deed or exploit is done by any of their nation, it is represented to the people with all insinuating circumstances, to make them proud of the honour of being subjects in a state where such mighty deeds are done. Besides, for encouragement, there is, for the most part, a monument or statue erected to the memory of them who do great things.

Their solemnizations of *Victoirs*, as they call them, seems to me of great use, like triumphs among the *Romans*. For those bonfires and other expressions of joy do make glad the people, and give them better thoughts of their governors, and dispose them to their service.

In the service of God the people seem more delighted and concerned in that part of worship which consists in singing than any other, and they provide more for it. For in their churches there are few other books among them than *Psalters* bound up with the *Church-Catechism*.

The common sort of women (not to say all) seem more fond of and delighted with lascivious and obscene talk than either the *English* or the *French*.

The women are said not much to regard chastity whilst unmarried, but when once married none more chaste and true to their husbands.

The women even of the better sort do upon little acquaintance easily admit saluting with a kiss; and it is familiarly used among themselves either in frolicks or upon departures and returns though never so short.

The women are in a sense privy-counsellors to their husbands: for they are for the most part privy to all their actions; and the men seldom do any thing without their

their advice and consent. Yet doth not this indulgence enamour them of their own nation; for it is said, that, if a woman can get an *English* husband, she will never marry a *Dutch*.

The *Dutch* when they see their friends at the point of death, and past all hope of recovery, out of pity and tenderness, desirous to rid them out of their pain, will sometimes hasten their end by withdrawing the pillow, or the like. Thus far Mr. *Barnham*.

In most of the cities and towns in the *Netherlands*, there are a great number of chiming little bells which seldom rest, but were to us troublesome with their frequent jangling. But for rings of great bells, all *Europe* cannot shew so many as *England* alone; so that it might well be called the *Ringin' Island*.

A multitude of storks frequent these countries, building upon their chimnies in the towns and cities as well as villages; but not in the territories of common-wealths only (as some imagine) but of Kings and Princes also, as at *Louvain* and elsewhere in the King of *Spain's* country, and in *Germany* in several Princes dominions.

June 22. We travelled from *Maestricht* to *Liege* four leagues distant. In the side of a hill we ascended at some distance from *Maestricht*, we saw an arched passage into a vault (as we were informed) some two hours in length. A good way within under ground they dig stone, which here they bring out in carts. It being a wet season, we made no stay to go into this vault, therefore I have added here the description of it out of the *Philosophical Transactions*, numb. 67. pag. 2051.

There is an excellent quarry within cannon-shot of *Maestricht*, upon the very brink of the river *Muse*, lying in a hill; where there are about 25 fathoms of rock and earth over head; the length of the hill being of some miles extending along the river towards *Liege*, situate on the same river: and towards *Maestricht*, having in breadth some half or quarter of a mile, but somewhat more further off. This quarry hath one entry towards the river, where carts can pass with great ease, and unload the stones upon the brink of the river, the quarry within lying parallel to the horizon or level, (which is a great advantage) and elevated but very little above

above the river. This same quarry, which hath well nigh undermined the whole hill, affords one of the most surprising prospects, when well lighted with many torches, that one can imagine : for there are thousands of square pillars in large level walks, and those almost every where above twenty, and in some places many more foot high, and all wrought with so much neatness and regularity, that one would think it had been made rather with curious workmanship for an under-ground palace, than that those pillars and galleries were made by quarriers that did it only for getting stone to build above ground. This quarry serveth the people that live thereabouts for a kind of impregnable retreat when armies march that way : for, being acquainted with all the ways in it, they carry into it whatsoever they would have safe, as well their horse and cattle as their moveable furniture, till the danger be over, there being so vast a deal of room, that 40,000 people may shelter themselves in it. And he that should attempt to seek them out in this vast wilderness of walks and pillars, without an expert guide, would not only be in hazard of losing his way, but of being knock'd on the head at the corner of every pillar ; where people, lurking in the dark with their carbines and fowling-pieces, would have fair opportunity of shooting at them by the light of their own torches, &c.

Further upon the downs we saw three or four more of these passages, and from hence had again a very pleasant prospect of *Maestricht* and the country about the river *Mose*.

Liege or *Luyck* is a large city, but not comparable to the *Holland* towns for beauty or riches ; built for the most part of timber ; some of the houses being cover'd with boards after the *Scotch* fashion, and some with slate [the walls I mean] the rest uncover'd and of clay. The streets are neither broad nor clean kept. The river *Mose* here divides itself, and runs through the town in two or three branches, over which are several bridges. Here is a convenient key, and upon the river we observed boats of an extraordinary length, the like whereto we had before seen at *Utrecht* and *Dort*. This city is pleasantly situated, and environ'd almost round with hills. On the brow of a hill which hangs over it, stands a
E fort

fort or castle which commands it. Upon the sides of these hills are abundance of orchards and cherry-gardens: on those near the city we first saw vine-yards; though there are near *Louvain*, which we saw not. All belly-provisions are cheap here. A great many of poor and beggars you meet with at every corner, but they are not importunate if denied. The country people are civil, well-manner'd, and kind to strangers. The women are of a dusky complexion, and generally not so handsome as the *Hollanders*. They do a great deal of drudgery, the poorer sort carrying coals and other burthens on their backs in baskets of a conical figure, to the end or bottom of which they apply a stiff baston, and so rest themselves without setting down their burthens. Near this city are gotten coals in great plenty, but they lie very deep under ground; some of us went down into a pit 150 yards deep. The coal are like our stone-coal. The arts they use to get air enough to serve them in the bottom of these dells, see in the *Philosoph. Transact.*

At *Luyck* they use also for fuel a sort of round balls made of clay mixed with a certain proportion of coal, beaten small, temper'd together, and dried in the sun, which they call *Hotshots*. These we never saw used any where but here, though the making of them is described in many books. They serve to flake the heat of the fire, and keep the coals from burning out too fast. Here and at *Namure* (as we were told) are made stone pots and jugs. The cathedral church is dedicated to St. *Lambert*, to which belong 60 *Canonici majores*, who must be all of noble blood, except some few scholars which they may chuse in. By these the bishop and prince of *Liege* is elected. Besides these there are twelve *Canonici mediocres*, and twelve *minores sive parva mensæ*. On weighty occasions the prince assembles the states of the country for their advice. The *Clergy*, *Gentry*, and *Commons* send their several deputies to these conventions. No law can be made, nor any great tax imposed without their consents. In this city are an incredible number of monasteries, or religious houses, as they call them. In the garden of the *English Jesuits* college we saw many ingenious dials invented by *Franciscus Linus*. In the church of the *Gulielmites* cloister without the walls we saw Sir *John Mandeville's* tomb-stone.

In

Moral, and Physiological.

51

In the vestry are kept his saddle, spurs, and bridle-bit; as also two great knives, which the monks, who shew'd us these things, told us were given him by the Emperor of the *Turks*, being such as himself used. Upon his tomb-stone was this inscription:

HIC JACET VIR NOBILIS DNS JOES DE
MANDEVILLE AL' DICTUS AD BARBAM
MILES DNS DE CAPDI NATUS DE AN-
GLIA, MEDICINE PROFESSOR, DEVOTIS-
SIMUS ORATOR ET BONORUM LARGIS-
SIMUS PAUPERIBUS EROGATOR, QUI
TOTO QUASI ORBE LUSTRATO, LEODII
DIEM VITE SUE CLAUSIT EXTREMUM
ANNO DNI M^o CCC^o LXXI^o MENSIS NO-
VEMBRIS DIE XVII.

Thereon was also engraven the figure of an armed man, treading on a lion, having a forked beard, his hand lift up to his head in a blessing posture, and these words going out of his mouth, *VOS KI PÁ-
SEIS SOR MI POUR L'AMOUR DEIX PROIES
POR MI.* Which is old *French*, signifying, *You that
pass over me for the love of God pray for me.*

June 26. We travell'd hilly and stony way from *Spaw*.
Liege to the *Spaw*, seven hours distant. We had in
prospect, on the left hand as we rode, *Franchimont* castle,
and soon after came to the view of a deep valley, in
the bottom of which lay the *Spaw*. It is a pleasant
little wall'd town, though call'd a village, indifferently
well built for a place so remote from commerce. The
inhabitants reap no small benefit from the frequency
of strangers, which, in the summer-time, repair thither
in great numbers to drink the medicinal waters. There
is one well called *Peuhont*, within the town, in the
market-place, which tastes strong of vitriol, the virtues
whereof are contained in this distich written over it.

*Obstructum reserat, durum terit, humida siccant,
Debile fortificat, si tamen arte bibis.*

The other wells are at a good distance from the town, (1). *Sauvenir*, to the eastward, about an hour's walk remote, (2). *Geronster*, as far to the southward, and (3). *Tonnelet*, about the mid-way between *Pouhont* and *Sauvenir*. These waters seemed to me more brisk and sprightly, and better sated with mineral juices, than any I have tasted in *England*, and doubtless are more nimble and vigorous in their operations. But of their several natures and virtues *Henricus ab Heers* hath written a particular treatise, intitled *Spadacrene*, to which I refer the reader that is desirous to know more of them. In the woods and upon the rocks near this town we found many rare plants, which we had not before met with, I mean spontaneously growing in their natural places, viz. *Asclepias flore albo*, *Polygonatum minus*, *Cyanus major*, *Rapunculus spicatus*, *Campanula persicifolia*, *Sideritis flore pallido similis Ladano segetum*, &c.

Limbourg. June 28. From the *Spaw* we travelled to *Aken*, passing through *Limbourg* three hours distant, a town considerable for its strength, being situate on the side of a hill, and encompassed with a strong wall and trench; not for its bigness, it consisting only of one short broad street, nor for its beauty, the buildings being all of wood. The garrison at our being there was about 300 soldiers. Before we entered the town we were met upon the way by some of these soldiers, who very insolently stopp'd our horses, demanding money of us, which we were forced to give according to their discretion, before they would let us pass; which, though it were no considerable sum, yet was more than we were willing should be violently extorted from us. When we were past the town, we met also with many of these stragglers, by whom (it was told us) many robberies are committed hereabout.

Aken.

Aken, called by the French *Aix la Chapelle*, to distinguish it, I suppose, from *Aix* in *Provence*, is a free city of the empire, very considerable for its strength and greatness, being encompassed with a double wall, and having in it 30 churches. About now some 15 years ago here happened a lamentable fire which almost ruined the town, burning down to the ground 4500 houses, from which calamity it was not half recovered at the time

time of our being there. In the great *Piazza* or market-place is a handsome fountain, with this inscription about the edges of the basin: *Hic aquis per Granum Principem quendam Romanum, Neronis & Agrippæ fratrem inventis, calidorum fontium thermæ à principio constructæ, postea verò per D. Carolum Magnum Imp. constituto ut locus hic sit caput & regni sedes trans Alpes, renovatæ sunt: quibus thermis hic gelidus fons influxit olim, quem nunc demum hoc æneo vase illustravit S. P. Q. Aquisgranensis, Anno Domini 1620.* The iron crown wherewith the Emperor is crown'd, and the sword of *Charlemagne*, which he holds when he is crown'd, and is obliged to wear by his side three days together, and wherewith he creates noblemen; as also the gospels, said to be written by the Evangelists own hands, are here kept, and every coronation sent to *Frankfurt*. The chair, wherein the Emperor sits when he is crown'd here, hath its sides of ivory, and its bottom as they fondly imagine of the wood of *Noah's Ark*.

This city (according to the best information we could get there) is governed by a mayor, two consuls or burgomasters, fourteen scabins, and about a hundred and twenty senators or counsellors. The mayor is president of the scabins and executes their sentences; he is put in by the duke of *Gulick* and continues during life, *modo bene se gesserit*. The consuls are chosen by the suffrage of the several companies of the city, and continue two years, *modo bene se gesserint*; every year there is one chosen. One that is no senator may be chosen consul or burgomaster, and yet these have the chief power. The scabins are judges and continue during life; when one of them dies, the rest chuse another in his place. The senators are chosen by the several companies, of which there are about fourteen or fifteen in this city. Every company chuses eight. Half the senate are yearly chosen. The territory of this city is large, containing about 200 villages, and is for the most part encompassed with mountains. We saw here the manner of making brass of copper, by mingling and melting therewith *Lapis Calaminaris*, which changes the colour thereof from red to yellow, and increaseth the weight by thirty in the hundred. But that for which this place is most remarkable, and from which it took its name, are the hotbaths,

of which there are several within the walls and others without, at *Borset* a great village less than an *English* mile distant. The waters of *Borset* at the sources where they issue out of the earth are much hotter than those of the *Bath* in *England*, and the springs more plentiful. The people there told us, and I can easily believe them, that they will serve to boil eggs in. Their taste seemed to us saltish. They are used outwardly for bathing, and taken inwardly for many diseases. As we walked to *Borset* we could not but take notice of a pool whose waters were almost tepid, by reason of a little stream from the hot baths running through it, wherein we were assured were bred and fed good store of fish, which are put into cold water for a month or two before they eat them. But of the nature, kinds, ingredients, and uses of the several hot waters, as well those of the city, as of *Borset*, the following abstract of an Epistolary Discourse concerning them written in *French*, and published by *Francis Blondel* M. D. will give the reader more particular information.



*Observations concerning the Baths of
Aken, collected out of an Episto-
lary Discourse Published in French
by Francis Blondel, M. D.*

NOT to trouble the reader with the various opinions of antient and modern philosophers concerning the cause of the actual heat of natural baths, our Author's account thereof in reference to these of *Aken* is in brief as follows.

These waters (saith he) passing through a certain argillaceous earth, pregnant with a kind of nitrous salt, almost of the same taste with the waters of the baths (which is to be found in good quantity in the lands about this city) charge themselves therewith, and so become a *menstruum* capable of dissolving such mineral metals as are contained in the veins of the earth through which they run. This solution he conceives is made by piercing and corroding the minerals, after the same manner as spirit of nitre and other *Aquæ Stygiæ* are wont to do, which usually causes a great ebullition and heat. So then the actual heat of these springs proceeds from the mixture and encounter of their waters (impregnated as is before intimated) with the mineral and metallic substances, juices, and spirits contained in the veins of the earth through which they have their course. The nitrous salt fore-mentioned may perhaps be the *Hermetic* salt of monsieur *Rochas*, or the *esurine* salt of *Helmont*. Now the water once heated, being contained in the vaults of the mountains as in a stove, continues hot a long time, the eruption thereof being, it is likely, at a good distance from the place where it did at first conceive its heat.

At the long continuance and duration of the heat of these waters, for so many ages past, no man need wonder: for (1.) It is generally taken for granted, that all

forts of mines do grow and increase by addition, converting the more refined, subtile part of the earth, and which hath a seminal disposition to such a change, into their own nature. (2.) The nitrous salts, the first ingredients of these waters, are also restored in their *matrices*, after the same manner as we see it happens in the *Caput mortuum* of vitriol, which, tho' the vitriol hath been once or twice extracted from it, will, by being exposed to the air, again recover more; whether it be by conversion of its *matrix* into its own nature, by a kind of aggeneration and transmutation, or by imbibing and retaining those subtile and volatile saline exhalations, which continually ascend out of the earth, or wander up and down the air.

As for the ingredients of these hot waters in general, he saith, That besides a threefold salt-nitre *fixed, volatile,* and *mingled*, or *armoniack*, they partake of a fixed and volatile *sulphur*, a *manna* of allum, some vitriol, divers metals, as copper and iron, a very little volatile earth, a certain *argilla*, sand and calaminary flowers. That they participate of copper he proves in that the territory of *Aken* abounds in divers places with *Lapis calaminaris*, which is, as it were, the aliment of copper: for being mingled in the furnaces with red copper, it augments it by the addition of 30 pound weight *per cent.* and gives it a yellow or golden tincture. As for iron, the many ferrugineous springs, that are found within and without this city, are an evident testimony that there are plenty of iron mines hereabout; and therefore most likely it is, it not certain, that these hot waters charge themselves with that metal. That they contain a three-fold nitrous salt, he proves from their natural evaporations. (1.) The fixed is found in the wells of *Borcet* and the *Emperor*, chrystallized into small shining square grains, mingled with a little flower of sulphur, sticking to the covers of those wells, which have not been of a long time opened. It may be also found in the chymical examination of these waters by evaporation, or distillation. (2.) The *volatile* is carried up by the volatile sulphur, as is hereafter shew'd in the description of the first sort of these baths. (3.) The *mingled*, or *armoniac*, is daily seen in all the waters of the city, and of *Borcet*, swimming in little cylinders

cylinders on the surface of the waters, and this is that cream, or scum, which is ordinarily found upon the waters in the basons. That they contain the rest of the beforementioned ingredients, shall be shewn in the description of the particular baths: the waters whereof our Author reduces to four sorts.

1. *Nitro-sulphureous*, such are those of the *Emperor's* bath, the *little* bath, and *St. Quirin's* bath. 2. *Sulphureo-nitrous*, such are those of *Compus*, or the *Poor-men's* bath, the *Rose* bath, and *St. Cornelius's* bath. 3. *Sulphureo-nitro-vitriolic*, such is another bath of the same *St. Cornelius*. 4. *Salso-alumino-nitrous*, viz. those of *Borcet*, a village adjoining to *Aken*.

I. As for the *Nitro sulphureous* kind, those of the *Emperor's* bath, and the *little* bath, are but one water, coming from the same source, and collected in one and the same well. That part reserved in the *Emperor's* bath is divided into five great basons, or receptacles: that in the *little* bath, into three. All which might be renewed daily, if time would permit, the spring is so copious. But by reason of the excessive heat of the waters, it is necessary oftentimes that they stand in the bason 16 or 18 hours to cool, before they be fit for the patient's use. Notwithstanding when they are come to a just temper, one may bathe in them, and endure them a long time, as those of *Borcet*, without any inconvenience. This source hath that of peculiar to itself, that in its well one may find distinctly a quantity of *nitre* coagulated, and good plenty of flowers of *sulphur* very light, purely fine, and well scented. The *nitre* sticks to the sides of the well, and so do the flowers of *sulphur* above that: the which sometimes, whether by the extraordinary boiling up of the fountain, or by the impetuosity of the ascending vapours, or by their own weight are broken off, and fall back into the source; from whence being no more dissolved by the water, they come forth intire into the basons. If you take of this water, and let it stand in a vessel certain days, it will precipitate of these yellow flowers of *sulphur*, to the bottom of the vessel. Besides these *volatile* flowers, these waters contain also fix'd flowers of *sulphur*, a competent quantity of *nitre* both *volatile*, *fix'd*, and *mix'd*, or *armoniac*, a little *allum*, less
vitriol,

vitriol, the spirits and principles of *copper* and *iron*, a very little *volatile* earth, *argilla* and sand: no *bitumen*, for let them stand as long as you please, you shall find no fatty substance swimming upon them, as upon the *Spaw* waters. The volatile *sulphur* evaporates so strongly, that it carries up with it a quantity of *nitre*, as one may see after the solution of the vapours, congealed and frozen in winter time, when it remains incorporated upon the walls, in the places where the icicles were. These waters are in weight equal to those of the *Spaw*; coming fresh out of the source, they appear whitish, or bluish, but having stood a while and grown cold, greenish. They are very pure, and leave no kind of mud, or *Lutum thermale* behind them; in cooling they yield a small scum, or cream of *nitre*. Far from their source, being wrought upon by the air, they let fall a little whitish sediment, as those of *Borset* do a blackish one. They preserve the colour of roses put into them, and cause them not to wither, as doth common water. The vapours ascending from them make silver plate black, as those of *Borset* make it white. The other source of St. *Quirin's* bath differs from these in no other respect, save that the water thereof is cooler. It is reserved in three basons. In this well you find neither *sulphur* nor *salt-petre* sticking to the sides, probably because it is open or uncovered.

II. The second, or *sulphureo-nitrous* sort of *Compus*, &c. tho' they spring up in several places, and have different wells, yet is the nature of them all, their composition, and mineral ingredients the same. The *Poor-men's* bath hath one great bason or receptacle, the *Rose* bath four, whereof two only are used, and St. *Cornelius's* bath of this mine two. These waters are fit for use at all seasons, being of a temperate heat, more efficacious, and of greater force in their operations, than the first sort; they weigh two *per cent.* more than they, and are of a stronger scent. In these is never found any *sulphur* condensed, no not in their wells, tho' they be covered: but when they are emptied, and new water let in (as in the *Rose* bath) the water running down along the walls and seats, into the bottoms of the basons or conservatories,

servatories, the external air prevailing upon it, so spread, and in such little quantity arrests, fixes, and condenses its sulphur all along the said walls and seats, refreshing the eyes of the spectators with its beauty and lustre. But the water rising in the beforementioned basons, and covering the seats and walls, the sulphur again unites and incorporates with its dissolvent, and disappears and hides itself therein. The water of these sources contains great quantity of sulphur, very fine and sweet, less nitrous salt, a little vitriol, and less allum, more of the other minerals and metals, than the first sort, or those of *Borçet*. So that they are more compounded, oleous and bituminous, than any of the other sources; and tho' they come out of the earth very temperate, as to actual heat, yet can sick persons hardly endure them for any long time, for the most part scarce half an hour.

III. The third sort, which I call *Sulphureo-nitro-vitriolic*, and is also of St. *Cornelius*, differs from the precedent, in that the taste is a little more acid, the smell sweeter, and liker that of spirit of vitriol, and the touch less oily. It is of less efficacy in use than the second sort, and of more than the first. Of this source there are three basons, which, with the two others of St. *Cornelius* beforementioned, make five in this house. These waters do agree much what in their composition with the precedent. They are very pure and clear, especially in their wells; and tho' they seem troubled in their basons, yet taken in a glass, they appear clear.

IV. The fourth, or *Sulfo-alumino-nitrous* kind, are those *Borçet* of the neighbourhood, or *Borçet*. These come out of baths. the earth extream hot, and in great abundance, are all of the same medicinal quality, have several wells, and are reserved in ten or twelve houses, each whereof hath two basons, or receptacles; besides which, there is a common bath exposed to the air, for the use of poor people. These waters cast off a copious excrement or tartar, which yet is not stone, but only a sand mingled with, and united to the nitrous and aluminous salt of the water, coagulated by the beating of the cold air on its superficies, to which also concurs the cold of the walls exposed to the same air. These excrescencies are found in

in the subterraneous conduits, not only of these, but the other baths in the city; being held to the fire, they soon become friable, and are nothing but a pure round sand like the common. The higher houses and basons have the more of this tartar, yet is it so little, that it is not to be seen or perceived in the water. These waters are of a different *species*, virtue, and operation from those of the city, are very easy to suffer, and serve often for divertisement and recreation to persons that are in health. The content of them is a great quantity of sea-salt and allum, less nitrous salt, a very little Sulphur, and not much of metallick substances.

Concerning the virtues and effects of these waters inwardly taken, he discourses to this purpose:

These waters taken inwardly are very available against the Phthick, *Asthma*, or difficulty of breathing, occasion'd by tough phlegm lodging in the branches of the wind-pipe; against the weakness of the stomach, indigestion, crudities, flatulencies, vomitings, hiccoughs, and inveterate cholicks. They dissipate and dry up all manner of catarrhs and serous defluxions; and are very proper to be drunk by those that are troubled with the palsy, before the use of the baths. They quicken the appetite, cleanse the blood, and open the obstructions of the mesentery. They are of excellent use against hypochondriacal maladies, especially in such as have weak and cold stomachs. They mollify the hardness of the liver, spleen, and mesentery. They dissolve and bring away the gravel of the reins and the lesser stones: and here he produces many examples of such as voided stones upon the drinking these waters, and among the rest of some that had drank the *Spaw* waters, and came from thence without receiving any benefit. They cleanse the ulcers of the bladder, dissolving not only the gross, phlegmatick and viscous humors which coagulate the stone, but even the stone itself, whilst it is yet tender. They have sometimes cured intermittent fevers of long continuance, and scrofulous tumors. They dry up and heal the itch, leprosy, and other affections of the skin. They stop the immoderate flowing of the *menfes* in women, and cure the jaundice, the paleness and discolouring of the skin in virgins: and finally they give ease and relief

lief in the gout. Of all these faculties, he brings instances and examples of persons that have been cured. Particularly that these waters drunk may have a power of dissolving the stone, he proves by this experiment: Taking a stone voided by a man about two years before, and infusing it in water hot from the fountain, for the space of three days, we found it (saith he) mollified and reduced into a soft phlegm. Which virtue of the waters was further confirmed to us by a late accident: for opening the vault of a well, there was found a certain glue or mucilage, which, it's to me probable, came from the solution of the mortar of lime and sand in long time, by the volatile and dissolvent spirits of the waters; especially there being found no other cement between the stones, and in that this same glue or mucilage mingled itself intirely with the waters of the fountains, without any appearance of scum or fat swimming on the top, so as gum of cherry, or the like is wont to do in water, and being cast into the fire burnt not, but dried up. These experiments and observations were made upon occasion of a burgomaster of *Riga* (who, being afflicted with the stone, drank these waters) his passing his urine thro' a linnen cloth, and finding therein a certain thick phlegm left behind, which, being kept a while upon paper, harden'd into a stony substance.

From *Aken*, June 29. We travelled through a small walled place called *Alienboven* to *Gulick*, five hours distant. This is an elegant little town, built of brick, though the houses be but low, having streight streets and a square *Piazza*. It is well fortified with a strong wall and trench, but most considerable for its citadel, which for greatness, strength, and beauty gives place to few that we have seen. Within it is a stately palace of the Prince, who for the defence and security of this city maintains here a garrison of 1000 soldiers. About ten or twelve years since this place was possessed by the *Spaniards*. When the peace was concluded between them and the *Hollanders*, it was agreed, that the duke of *Newbergh* should have *Gulick* and *Berg*; and the marquess of *Brandenburgh*, *Mark* and *Cleve*. The main trade and employment of this town is making of malt.

June

June 30. We proceeded on to *Collen* some seven hours distant from *Gulick*, by the way passing through a little walled place called *Berchem*. A great part of this day's journey was through pleasant woods. We observed, by the way-side and in the woods and hedges as we went, *Mazzerton Germanicum*, *Mollugo montana latifolia ramosa*, *Pulmonaria maculosa*, *Galeopsis five Urtica iners flore purpurascens majore, folio non maculato*, and among the corn, *Vaccaria Ger.*

Collen. *Collen*, though it gives title to an archbishop who is one of the electors, is a free city of the empire, and one of the greatest in *Germany*. The middle part of it is well built of stone, wherein are two fair and large piazzas, the skirts meaner and of wood. The walls of the city are of stone, very tall, but not proportionably thick, and covered with a *Tectum*. Round the walls without is a pleasant walk of trees, two deep trenches, and at convenient intervals strong bulwarks. Within the wall are inclosed 300 acres of void ground (not built upon I mean) planted with vines; of the grapes whereof we were told many hundred tuns of wine are yearly made. In the *Domo* or church of *St. Peter* are preserved in a golden chest the bodies (as they would have us believe) of the three wise men of the *East* that came to worship our Saviour, commonly called the three Kings of *Collen*; *Melchior*, *Gaspar*, and *Balthasar*. To this church belong fifty four canons nobles, and eight canons presbyters. By these sixty two with the dean of the cathedral, who hath two votes in the election, and the two consuls regent of the city who have four, is the archbishop chosen, who is not allowed to continue in the city at any time for above three days together. The government of the city is by six consuls or burgo-masters, who continue in office during life, yet but two only in power yearly; seven scabins and 150 senators. When a burgo-master dies, the senate chuses another into his place. The senators are chosen by the several companies of the city, and continue during life; only fifty are in power yearly; so the power revolves to the same every third year. The scabins are put in by the Prince, and continue during life. The main body of the citizens is of the *Roman* religion; yet are there a good number both of *Lutherans* and *Reformed*

formed or Calvinists. The Lutherans are allowed a church within the walls; the Reformed are forced to go cross the water a mile out of town to church. In one of the churches of this town are preserved the bones of those 11000 virgins which accompanied St. Ursula to Rome, and in their return here suffered martyrdom.

From Collen we went up the Rhine in a boat drawn by men, which brought us the first day to a small village called Vidich. By the way we found growing among the corn in great plenty, *Delphinium simplicifloro purpureo-vulgaris*, and *Nigella arvensis*: in some barren grounds near the rivers *Stachas citrina Germanica latiore folio* J. B. Next morning we passed Bonna, a pretty walled town with a handsome piazza. Here the elector of Collen hath his palace and usual residence. This night we lodged at a pitiful poor walled town called Brisaca, where we first began to have feather-beds laid upon us instead of blankets and coverlets.

July 6. We passed by Rineck castle on our right hand, and about a mile from Brisaca came to Andernach a walled town of some note, subject to the archbishop of Collen. Over-against this town is Hammerstein castle belonging to the archbishop of Triers. Then we passed by two castles of the earl of Weers, one on the right hand on a high rock, well built, with a cloister in it.

Two leagues from Andernach we passed by Engers, and this night lodged at Coblenz, a considerable city belonging to the archbishop of Triers, called in Latin, *Confluentes*, because situate at the confluence of the rivers Moselle and Rhine. Here is a fair stone-bridge of thirteen arches over the Moselle, which, notwithstanding its diminutive name, is no small river. Here is also a bridge of boats over the Rhine, to a strong castle called Hermanstein, situate on a high rock; under which, near the river, is a beautiful palace of the archbishop of Triers, whose name is Carolus Caspar. Not far hence is Helfenstein castle, near which springs an acid water. Another well of this nature there is at Antonisstein, three or four hours distant from Andernach, belonging to a cloister of Carmelites, who sell the water sealed up in bottles; a third of greatest note at Zwolbach, four miles off Frankfurt. All these waters are sold to the towns and countries about,

about, and commonly drunk mixt with wine, to which they give a pleasant taste and purging quality. I cannot say, as *Blondel* affirms of them, that upon mixture with wine I saw them smoke, or found them actually hot: Indeed I was not careful to observe these particulars.

July 7. We passed by *Lodesheim* town and castle on the left hand, and *Capelle*, a castle of the bishop of *Triers*, on the right; then a large island in the middle of the *Rhine*; next *Rens*, a small wall'd place belonging to the archbishop of *Collen*, on the right hand, and a little further *Browbach*, and a castle above it. About four hours from *Coblentz*, *Boppaert*, a wall'd town of some note on the right hand, and not far from thence, a castle called *Bornholm* on the left. We rested this night at a village called *Hertznach*.

July 8. In the morning we came to a pretty pleasant wall'd town call'd *St Gower*, a mile distant from *Hertznach*, under the Landgrave of *Hessen*, who lives in a fair castle, built on a rock above the town. On one of the towers of the wall, by the river's side, is fastened a brass ring, given by the Emperor *Charles V.* which is put upon strangers necks, and then they are obliged to drink wine, else they are sprinkled with water. The magistrates, and greatest part of the inhabitants of this town, are of the *Reformed* religion, yet have both *Lutherans* and *Papists* their churches. Just without the walls, over-against *St. Gower*, is a town and castle call'd *Weinich*. Somewhat further on the right hand is *Wesel* town and castle of the archbishop of *Triers*, and higher up on the left hand *Cub*, a considerable wall'd town, with a castle upon a rock, belonging to the Prince Elector *Palatine*. Here we observed a float of timber going down the river, which was directed by many men, who moved two long oars at each end thereof, which served instead of rudders. In the rocks hereabout is slate gotten.

Baccharac we came to *Baccarach*, a wall'd town on the right hand, having many towers, subject to the Prince Elector *Palatine*, famous for the goodness of its wine; as is also *Rhinow*, a town not far from *Mentz*. At this, and many other towns between *Collen* and *Mentz*, our boatmen paid toll. A little distance from hence we had in view a small wall'd town on the left hand, and on the right

right we left a pitiful village, yet walled about, called *Heinbach*, and came to a second of no better note, called *Dreckhausen*, where we lodged. Both these are under the archbishop of *Mentz*. Over-against *Heinbach* is *Lewry*, a small walled town of little account.

July 9. We passed by *Aspithouse* castle, then by *Moufe-tower*, standing in a little island, famous for the story of *Tower*. the bishop devoured by mice and rats. Over-against this tower stands a castle, and a little further up the river on the right hand, *Bing*, a handsome walled town be-*Bing*. longing to the Elector of *Mentz*: at some distance hence on the left hand, *Rhodes*, then *Gifon* and *Elveldt*, a walled town, and lastly, *Wallop*, where we observed storks nests upon the chimnies. This night we arrived at *Mentz*.

From *Collen* to *Widdich* the river is of a great breadth, but above that, till you come to *Moufe-tower*, much narrower, being streighten'd by high hills and rocks on each side. The sides of these hills are in some places covered with wood, in some planted with vines, and below the vineyards, near the river, are large orchards of fruit-trees. The vines are tied to stakes or poles, of about a man's heighth, so that, were not the poles much shorter, their vineyards would nearly resemble our hop-gardens. All this way the river flows with so swift a current, that I conceive it impossible to get up stream with oars and sails.

In this journey in the corn-fields, meadows, rocks, woods and sands by the river's side, &c. (which the slowness of our boat's progress gave us leisure to search) we observed many * plants, which we had not elsewhere, or but rarely before found growing wild, viz. *Gentiana cruciata*, *Chamædrys spuria angustifolia*, *Chondrilla juncea*, *Chamædrys laciniatis foliis*, *Lychnis sylvestris calyculis striatis*, *Persicaria siliquosa*, *Genistella montana Germanica* Park. *Genistella aculeata*, *Baphthalmum vulgare*, *Fraxinella*, *Cardamine impatiens*, *Iberis*, *Millefolium nobile*, *Digitalis lutea magna flore*, *Eryngium arvense foliis serræ similibus*, *Caucalis albis floribus*, *Saxifraga Venetorum*, *Chondrilla*

* Plants observed as we travelled between *Collen* and *Mentz*.

carulea, *Tithymalus magnus multicaulis* frue *Esula major*, *Helleboraster maximus* in great plenty, *Tithymalus pineus* and sundry others. Near the city of *Mentz* we found the *sea-gilly-flower*, or *thrift*, called by *C. Baubine*, *Caryophyllus montanus major flore globofo*, *Caryophyllus gramineo folio minimus*, *Caryophyllus arvensis umbelliferus*, *Cynoglossum minus*, *Tblaspi minus*, aliis *Alysson minus* J.B. *Tblaspi capsulis sublongis incanum*, *Heliotropium majus*, *Camphoratae congener*, *Prunella flore majore* & *Prunella foliis dissectis*.

Mentz.

Mentz is a large city and well fortified: the buildings generally old and but mean, the streets narrow and not well paved, yet are there many great houses of noblemen scatter'd up and down. The Prince's palace is moted about. The present Prince, or Archbishop's name, is *Joannes Philippus à Schaenborn*; he was besides bishop of *Wurtzburg*, and a few weeks since chosen also bishop of *Worms*. The canons of *St. Martin's* church here, who are in number 24, all barons or noblemen, chuse the archbishop out of their own number; and when any one of themselves dies, or is removed, a canon into his room out of the *Domicillares*. The arms of the archbishoprick is a wheel, derived from the first archbishop, who was a wheelwright's son, his name *Willigesus*, a *Saxon*; he was wont to say, *Willigese, Willigese, recogita unde veneris*. Jews are allowed in this city. Here is a bridge of boats over the *Rhine*.

July 13. We took boat for *Frankfort*, going up the river *Mænus* which near *Mentz* runs into the *Rhine*. By the way we took notice (1.) of *Rufethem*, a handsome fort on our right hand, belonging to the landgrave of *Darmstadt*. (2). A little further up on our left hand a small village called *Etersheim*, and (3.) *Hocht*, a walled town on the same hand, garrison'd by the Elector of *Mentz*. Here we may note, that the dominions of the Princes of *Germany*, that border on the *Rhine*, are strangely mingled one with another.

Hocht.

Frankfort. *Frankfort* is about five miles or leagues distant from *Mentz*, tho' the houses thereof are for the most part built of timber, yet is it fair, populous and rich, very strongly fortified and encompassed with a deep trench of water; the walls and bulwarks are kept very trim,
and

and in good repair. The river *Main* divides it into two parts, the lesser, on the south side, is called *Saxenhausen*. They are joined by a fair stone-bridge of about fourteen arches. In the great piazza are three handsome fountains. The Emperor is now-a-days usually chosen here in the *curia*, or senate-house; and crowned in the collegiate church of St. *Bartholomew*. There have been about 25 or 26 Emperors here chosen. By the favour of one of the consuls, or burgomasters, we saw the original imperial grant, or constitution, whereby the college of electors is appointed, called *Bulla aurea*. It had, in place of the seal, a great medal of gold hanging at it, on which was stamped, or engraved, on one side the figure of the Emperor *Charles IV.* with this inscription round, *Carolus quartus, divinâ favente clementiâ, Romanorum Imperator semp. Aug.* On the reverse, the figure of the city of *Rome*, and thereon written, *Aurea Roma*, and round about, this rhyming verse, *Roma caput mundi regit orbis fræna rotundi*.

This city is governed by 42 senators, two burgomasters, a prætor, and fourteen scabins. The senators are divided into three *scamna*, or benches: the highest is *Scabinorum*, the second, or middlemost, *Literatorum*, and the lowest, *Opificum*. When one of the scabins dies, or is removed, they choose into his room one out of the *Scamnum Literatorum*. Those of the *Scamnum Opificum* can rise no higher. These senators choose yearly the two consuls, or burgomasters, out of their own number. The people have no part or interest in the government of the city, or choice of the senate. Many *Jews* live here, who have their *gheto*, or particular quarter, wherein they are locked up every night. Their trade is only brokage, and most of them are very poor. They are forced to wear a piece of yellow cloth somewhere about them, to distinguish them from other people.

All the magistrates, and the greatest part of the citizens are *Lutherans*, who have five churches. The *Roman Catholics* are allowed the free exercise of their religion, and have within the city two cloisters of men, and one of women. The *Reformed* had formerly a church within the walls, afterwards, that being taken from them, they had one just without, which being burnt down,

whether by accident or malice, their church is now a good distance from the town. The *English* church, used in *Q. Mary's* days, goes to decay. The *English* house is made a granary, or store-house. The country hereabout is pleasant, and the ground rich. We found growing wild *Gramen amoris dictum & Ischaemon vulgare*, *Portulaca sylvestris*, and in some hedges, *Alfne baccifera*, which, it was not my fortune in all this voyage, to meet with any where else.

July 17. We left *Frankfort*, taking the post-coach for *Frankenthal*. After one half hour's riding, we enter'd into pine-woods, the first we met withal: they reach'd almost to our lodging, this night, which was at a village called *Geirsheim*, three *German* miles from *Frankfort*.

Kernsheim July 18. At a little walled town called *Kernsheim*, we ferried over the *Rhine*, and at six miles end came

Worms. to *Worms*, a great old city, but meanly built, and in a decaying condition. It seems formerly to have been richer and more populous. The bishop is chosen by the canons of the great church, being 20 in number. All the magistrates are *Lutherans*. After we had passed *Worms*, one hour's riding brought us to *Frankenthal*, or (as we usually pronounce it) *Frankendale*, a town belonging to the Prince Elector *Palatine*, situate in a level by the *Rhine*, more considerable for its strength than greatness. The houses are low built, the streets broad and streight. The wall, mounts, and outworks neatly kept in good repair. The garrison consists of five companies, whereof two are citizens. There are in it three churches, one *Almagne*, one *Low-Dutch*, and one *French*.

Spier. July 20. We travelled from *Frankendale*, beside the *Rhine*, thro' *Obersheim*, a small walled town to *Spier*, two miles and a half distant. *Spier*, tho' it hath a bishop, yet is it a free city of the empire, and governed by its own magistrates, of considerable strength and greatness. The houses are most old-built of timber, rather vast than handsome or convenient. We could not learn that there was any considerable trade driven here, so that were it not for the imperial chamber (which draws much company hither) we believe it would soon grow

poor and infrequent enough. The *Romish* religion prevails most, yet have the *Lutherans* their church. In the cathedral church are the monuments of several Emperors and bishops, who lie interred there. The imperial chamber consists of 36 assessors, and a chief president appointed by the Emperor, besides whom, there are other three presidents chosen by the Emperor out of the delegates. Every Elector of the empire, and each of the ten circles, send two delegates or assessors. There is another chamber of like power at *Vienna*. These courts determine all controversies arising between the several Princes and States of the empire, by majority of vote. The subjects also of many of the Princes may appeal from their own Princes to this court; but it is not prudent nor safe for them so to do, unless they first withdraw themselves out of their territory. Some Princes, as the Count Palatine, have *Jus non appellandi*.

July 21. We turned a little backwards, and crossed over the *Rhine* to *Manheim*, a town belonging to the Prince Elector Palatine, situate just in the angle made by the *Neccar* and *Rhine* meeting, and strongly fortified. The houses in the late wars were most of them beaten down, but now they are rebuilding them a-pace, the Prince having given the town great privileges, to invite strangers to come and inhabit there. At the time of our being there, his highness was building a new citadel, which was like to prove a strong piece. It wanted not much then of being finished. Who it was that first advanced this place to the dignity of a city, and fortified it with walls, ditches and bulwarks, this inscription over over the gate, towards the *Neccar*, will acquaint the reader.

*Quod felix faxit Jeshova,
Fredericus III. Elector
Palatinus Rheni, Dux Bavariae,
Ex veteri Pago Manhemio
Ad Rheni Nicrique confluviū
Juxta spatiorum dimensione
Nobilem Urbem molitus,
Vallo, fossa, muro clausit,
Portam bonis civibus aperuit.
Anno Domini MDCX.*

Heidelberg July 22, From *Manheim* we rode to *Heidelberg*, just before we enter'd the town passing a wooden bridge over the *Neccar* cover'd over with a *teetum*, as are also many of the great bridges in *Switzerland*, to preserve the timber, as I conceive, from the injuries of the weather. *Heidelberg*, tho' none of the greatest cities, yet is the chief of the *Palatinate*, and for its bigness, populous; which is much, considering the devastations made by the late wars in this country. The houses are most of timber, yet handsome, and in good repair; which argues the inhabitants to be industrious, and in a thriving condition. It is situate on the right bank of the river *Neccar*, under hills of considerable height; by reason of which it cannot be made strong, tho' it be encompassed with a double wall and trench.

In this city are five jurisdictions, (1.) *Aulica*, under which are all the Princes or Noblemen: of this jurisdiction the master of the house is president. (2.) *Cancellaria*, under which are all the councils and other officers, as advocates, doctors of law, &c. (3.) *Bellica*, or the soldiery: the general is their president. (4.) *Academica*, in which the *Rector magnificus* presides, and (5.) *Civica*. The members of each jurisdiction may refuse to be judged by any but their own judge, before whom the plaintiff must implead them, according to the maxim in law, *Actor sequitur forum rei*. The city is divided into four quarters, and governed by a *praetor* and *burgomasters*. It can raise two companies of foot, and one of horse. The *Lutherans* are permitted the exercise of their religion here, and have lately built them a church: there are also *Roman Catholics*, who have a church without the walls.

About the middle of the ascent of the hill, called *Koningsthal*, stands the castle where the Prince keeps his court, a stately pile and of great capacity, encompassed with a strong wall and a deep trench hewn out of the rock, which, upon occasion, may be filled with water. Over the gate leading into the palace, is a *Dutch* inscription, signifying the building of it by *Ludovicus V.* in the year 1519. It is not all of one piece, but since the first foundation several buildings have been added

added by several Princes. One part is called the *English building*.

Under one of the towers stood the great tun, which almost fill'd a room. It held 132 fudders, a fudder (as we were informed) being equal to four *English* hogheads. The old tun is taken in pieces, and there is a new one in building by the Prince's order, which is to contain 150 fudders, or 600 hogheads. Being invited by the Prince's order, we dined in the palace, where we observed all things carried with little noise, and great decency. After dinner, his highness was pleased to call us into his closet, and shew us many curiosities, among others (1.) a purse made of *Alumen plumosum*, which we saw put into a pan of burning charcoal, till it was thoroughly ignite, and yet when taken out and cool, we could not perceive that it had received any harm at all from the fire. (2.) Two unicorn horns, each eight or ten foot long, wreathed and hollow to the top. By the way we may note, that these are the horns of a fish of the cetaceous kind (two distinct *species* whereof you may find described and figured in the *History* and Description of the *Antilles*, or *Caribbee* Islands, written in *French* by R. F. of *Tertre*, and the head of one in *Wormius's Musæum*) not the horns of a quadruped, as is vulgarly, but erroneously thought. Whatever the antients have delivered, modern voyages and enquiries have discovered no other terrestrial unicorn besides the *Rhinoceros*, which, it's most likely, is signified by the word *QNT* used in scripture, which the *Septuagint* render *Μονόκερος*. (3.) The imperial crown and globe of *Rupertus Imp.* who was of this family, richly adorned with precious stones. (4.) An excellent and well digested collection of antient and modern coins and medals of all sorts, in which the Prince himself is very knowing. Among the rest, we could not but take notice of a *Swedish* doller of copper, about the bigness, and of the figure of a square trencher, stamped at the four corners with the King's image and arms, of that weight, that if a man be to receive ten or twenty pound in such coin, he must come with a cart and team of horse to carry it home. The Prince Palatine's name and titles are, *Carolus Ludovicus, Comes Palatinus Rheni, sacri Ro-*

mani Imperii Elector, utriusq; Bavariae Dux. He speaks six languages perfectly well, viz. *High-Dutch, Low-Dutch, English, French, Italian and Latin*, is greatly beloved of his subjects, of whom he hath a paternal care, and whose interest he makes his own.

In the great church where the famous library was kept, we observed many fair monuments of Princes of this family, some with *Dutch*, most with *Latin* epitaphs or inscriptions: others in the *Franciscans* church. In *St. Peter's* church also a great number of monuments of learned men of the university; which is of good account and one of the best in *Germany*. Three or four colleges there are built and endowed chiefly for the maintenance and accommodation of poor students.

The government of this university is by a senate, which consists only of sixteen professors. The number of professors is limited, and their stipends fix'd by the statutes of the university given them by their founder *Rupertus* count palatine *Anno 1346.* and confirmed by the Pope and Emperor. Of these professors three are of *divinity*; four of *law*; three of *medicine*, and six of *philosophy*. Of the philosophy professors four only are admitted into the senate, lest they should make too great a party. Besides the senate chuses a-new the philosophy professors every year, and may change them if they please: the other professors are chosen for term of life. When one dies the senate chuses two and presents them to the Prince, of which he takes one to succeed in the vacant place. This senate chuses every year a *rector magnificentissimus*, which is only an honorary title conferred upon some Prince or great person, for he hath no power at all in the university. (2.) A *rector magnificus* out of their own number by major vote, the chief officer for power and answerable to our *vice-chancellor*. (3.) An *ædilis* who takes care of the publick buildings. (4.) A *præfectus rei vinariæ*. (5.) A *præfectus rei frumentariæ*, which officers answer to our *Taxers*. (6.) A *quæstor*, who gathers up the university revenue and rents. Further this senate is a jurisdiction by themselves, and have absolute power in criminal causes extending to life and death: only after sentence given the Prince may pardon. The degrees conferred here are in philosophy *masters*, of which lately there have been but

but few created; in law and medicine *licentiates* and *doctors*; in divinity *batchelors*, *licentiates*, and *doctors*, of which last there have been but few lately. They confer degrees without any regard of standing. The candidate must undergo a double *examen*. (1.) By the faculty wherein he is to commence, the *rector magnificus* being present, and if he be found unsufficient he is remitted, and appointed a certain time to study to prepare himself. (2.) By all the professors together, the *rector magnificus* being also present. The first they call *Examen tentatorium*, the second *rigorosum*. Having past both *examens* he is to dispute publicly *sub Præside*, then to make a lecture in the faculty wherein he is promoted, and lastly a speech. The speech ended, he asks the vice-chancellor, *ut facultatem promotori ipsum promovendi*. Note that by the statute the *Præpositus Ecclesiæ Warmatiensis* is perpetual chancellor, and substitutes a vice-chancellor in his place. But now this is only done *pro forma*, for the university is not obnoxious to the chancellor. The vice-chancellor granting leave, the promoter, who is usually the * dean of the faculty, in the name of the Prince Elector, and by the leave of the vice-chancellor, pronounces such an one doctor, and bids him ascend *in superiorem cathedram*; then kisses him, puts a ring on his finger, and a cap on his head, and gives him a book first shut and then open. Then the graduate takes an oath touching with his finger the two beakles staves set leaning one against the other, and last of all feasts the professors in the room called the *Prytaneum*, which is now used as the divinity-schools: At which feast the Prince himself is present or sends the marshal of his house. To save charges two or three candidates, if they be of meaner condition, get to be promoted together.

* Note that the professors in each faculty take the deanship by turns, though the senate may appoint any other.

D. T. O. M. A.

Cursus Lectionum Publicarum & Privatarum, quas almæ Universitatis Archipalatinae D.D. Professores hoc Anno D.DC.LXII. Rectore magnifico Jacobo Israel Med. Doct. & Physiolog. Prof. ordinario, habebunt, juxta Facultatem seriem distributus.

IN FACULTATE THEOLOGICA.

Horâ X. **F**Ridericus Spanhemius, SS. Theologiæ Doctör, & Professor Ordinarius Novi Testamenti; Diebus Lunæ, Martis, Jovis & Veneris, alterâ quidem Septimanâ persequitur Vindicias Locorum controversorum, alterâ verò illustriora ex Paulinis Epistolis loca, eâ methodo exsequitur, ut præmissis Quæstionibus, ad elucidationem cujusq; loci subjungatur, cum Analysis Logica, tum Paraphrasis Rhetorica, tandêmque eruantur ordine usus cum theoretici tum practici.

Collegia privata exegetica, disputatoria, examinatória, prioribus nuper absolutis, Studiosis offert, Disputationes ordinarii & extraordinarii argumenti negantur nunquam.

Horâ IX. Johannes Ludovicus Fabricius, SS. Theologiæ Doctör & Professor Ordinarius, diebus Lunæ, Martis, Jovis & Veneris Theologiæ Systema explanare perget, præterea absoluto Casuistico Collegio, Universale explicatorio-examinatorium, aliâque pro Studiosorum desiderio exercitia tum publica tum privata continuabit atque instituet.

Henricus

II. In FACULTATE JURIDICA.

Henricus David Chuno, D. & Jurium Professor pri- Horâ IX.
marius Academiæque Procancellarius, Lectiones Codicis, cujusque tituli principiis & fundamentis propositis, legibusque peregrinis & fugitivis, id est, non suo titulo collocatis, (ubi spicilegium facturus est) seorsim explanatis, publicè continuabit : addendo Jurium concurrentium ampliaciones & restrictiones ex omni Jure.

Idem privatim operam suam pro captu & desiderio Studiosorum æquè ponet.

Johannes Fridericus Bœckelman, J. U. D. Pandectarum Professor Ordinarius, & Judicii Electoralis Aulici Assessor, publicè Pandectas docebit hac methodo, ut (1.) cujusque tituli quæ est, ostendat connexionem. (2.) Jus certum, quod in Legibus eo spectantibus reperitur, per definitiones, divisiones & Canones compendiosè proponat. (3.) Controversas quæstiones, additis solidioribus rationibus propugnandi & oppugnandi subjungat. (4.) Siqua lex nostris Viciniorumque moribus antiquata est, moneat. (5.) Denique textus in quibus singularis materiæ alicujus sedes est, speciatim assignet.

Collegium etiam disputatorium publicum, necnon explicatorium privatum, utrumque ad Pandectas institutum, continuabit, aliisque exercitiis Auditoribus, uti hætenus prodesse studebit.

Banier Shuttenius, J. U. D. Institutionum Imperialium Professor Ordinarius, in tradendis Institutionibus sensum cujusque paragraphi genuinum ubi exposuerit, dubia occurrentesque circa præsentem materiam controversias breviter resolvit.

In Collegiis privatis, explicandi, dictandi, disputandi operam (quam nec publicè denegabit) etiam pollicetur.

III. In FACULTATE MEDICA.

Johannes Casparus Fausius, Medicinæ Doctor & Professor primarius, necnon Archiater Palatinus; Præcticam Medicinam docet, Ideas morborum succinè tradit. Medicamenta diversa, officinalia & Chymica, eorumque præparationem enarrat, & formulas elegantiores cum propriis longæ

longæ praxeos experimentis feliciter tradit. Chymicam quoque officinam ejus rei Studioſis aperuit.

Horâ III. Jacobus Israel, *Med. Doct. & Physiologiæ Profeſſor Ordinarius*, à Nundinis Autumnalibus ad Vernales Anatomiam & Chirurgiam: à Vernalibus verò ad Autumnales Institutiones Medicas enodabit.

Ex Collegiis privatis unum Anatomicum diſſectorium, quod circa manuaſem diſſectionem operabitur: alterum de generatione & incrementis pulli in ovo beneficio furni Chymici & ignis Lampadis habebit.

IV. In FACULTATE PHILOSOPHICA.

Horâ I. Johannes à Leuneshlos, *P. & M. D. Mathematicum & Phyſicæ Profeſſor Ordinarius*, in Phyſicis publicè ſpecialium noſtræ telluris Corporum naturam enucleabit, privatim Collegia aperiet, in quibus res generationi & corruptioni obnoxia

Horâ XII docebitur, & ad interrogata reſpondebitur. Circa Geographiam theoricam & practicam Auditoribus induſtriam ſuam non ſolùm publicè docendo probabit, ſed & eoſdem privatim tum in eadem, tum in aliis ſpatioſæ Matheseos partibus, ut Arithmetica, Harmonica, Geometria, Aſtronomia, Optica, Architectonica Civili & Militari, aliisque vel neceſſariis, vel rarioribus Elegantius, tam theoricè in ædibus ſuis, quam practicè in Obſervatorio & Campo ad diſcentium nutum & captum inſtituere haud gravabitur.

Horâ IX. Johannes Seobaldus Fabricius, *SS. Theologiæ Doct. & Eccleſiaſtes*, necnon Linguae Græcæ Profeſſor Ordinarius, Xenophantis Κόρυ καὶ δόξας Βιβλίου Α. pertractabit.

Horâ II. Sebastianus Ramspeck, *Politices & Eloquentiæ Profeſſor Ordinarius*, Synopſeos Politicæ telam propediem pertextet, Oeconomicorum Epitomen breviter illuſtrandam additurus, idque diebus Lunæ, Martis & Jovis: diebus Veneris M. Tullii de Oratore libros Rhetoricè ac Politicè illuſtrabit. Studioſis quinetiam id petituris publica privataque induſtria ſuccurret.

Horâ X. Stephanus Gerlachius, *Hiſtoriæ Eccleſiaſtica Profeſſor*, Hiſtoriam Sulpitii Severi eadem quâ cœpit methodo hoc ſeſmeſtri perſequetur. Statum nempe ac facièm Veteris Eccleſiæ,
ab

ab obitu usque Moysi ob oculos ponens: modum Reip. ritus morisque explanans. Sententias Judæorum ac Christianorum, cum veterum tum recentium Impp. breviter exhibens & conferens, quicquid denique ad ornandam Historiam lucemque ei faciendam facere videtur, proponet.

Si insuper nonnulli forsitan in cæteris Studiis literariis privatim ipsius operam expetierint, fide sua istis ac industria non deerit.

Samuel Puffendorff, Professor Publicus, Jus Naturæ Horâ III. & Gentium ad duæm Grotii tradere perget, & in eo erit, ut hac hyeme opus istud ad finem perducatur. Operam quoque suam privatam, siqui eam sunt petaturi, nemini denegabit.

Joh. Carreus, Verb. Dei Minist. & Collegii Sapientiæ Horâ III. Præceptor, in Metaphysicis Logicis & Ethicis Lectiones habet diebus Lunæ, Martis & Jovis, die Veneris Theses disputandas proponit.

Honorum verò Academicorum, Disputationum, Lectionum Cursoriarum, Anatomicarum demonstrationum & Panegyrici actus creberrimi habentur.

Et ne animus solum Sapientiâ excolatur, verum & ipsum corpus ingenuis Exercitiis ad virilem virtutem excitetur, Vir Artis Equestris callentissimus, cujus sancta celeberrima jam plusquam percrebuit, Equestri Gymnasio singulari cum laude præest.

Linguarum verò exoticarum Præceptores, Lanistæ atq; aliarum elegantiarum Artifices, certatim in artibus suis docendis peritiam ac sedulitatem demonstrare allaborant.

The Prince Elector is absolute in his own territory. He can make laws and repeal them, treat with foreign Princes, sending ambassadors to them, and receiving ambassadors from them, make war and peace, impose tributes arbitrarily on his subjects, without the consent of the States of the country. The Emperor hath nothing to do with his subjects, they swearing allegiance only to him. He only can excommunicate, having reserved to himself the episcopal power. The Prince Elector hath seven councils or courts. (1.) Concilium Augustum, or his privy council. (2.) Concilium Status. (3.) Concilium Ecclesiasticum, consisting of four, whereof two are laymen,

OBSERVATIONS *Topographical,*

men, and two clergy. (4.) *Dicafterium*, who judge causes between man and man. (5.) *Concilium feudale*. (6.) *Concilium reddituum temporalium*, or *rationum*. (7.) *Concilium reddituum Ecclesiasticorum*. The Prince hath thought fit to keep these two last distinct, partly that he may know how to proportion the ministers allowance, and partly that if any of his successors should happen to change his religion (as is ordinary for Princes to do in *Germany*) they may be able to distinguish clearly between their own proper temporal and the church revenue.

The Prince in his own territory is general bishop and supreme head in ecclesiastical affairs. Formerly this country was under the inspection and jurisdiction of the bishop of *Spier*, but, since the reformation, the Prince hath not only seized the revenues of the church into his own hand, but also assumed to himself intirely the episcopal power and jurisdiction. He is also universal patron, and disposes of all vacant benefices as he pleases: indeed, the council of four nominate and present two unto him, of which usually he chuses one; because it may well be presumed that he knows not so well as they what persons are best qualified and fit to be preferr'd; but he is not obliged to confer the benefice upon either of the persons by them so nominated, but may either put in another known to himself, or command them to nominate others, if he like not those presented. The religion of the country is the *Reformed*. The whole palatinate is divided into three *Præfectura*, and some, viz. the greater of these subdivided into less. Every *Præfectura* hath its inspector or bishop, who is pastor of some church in that *Præfectura*: he differs not from any other in any jurisdiction, but in that commonly he hath a larger stipend. His business is only to give information, if he be of a lesser division, to the inspector of the whole *Præfectura* under which he is; if of a greater, to the council of four. If need be, every *Præfectura* or great town hath a presbytery. The presbytery of *Heidelberg* consists of the five ministers of the city, two deputies from each jurisdiction, except the *Aulica*; and two from each quarter of the city; so that, at this time, the number in all is twenty-one. These all have equal suffrages,

frages, the lay-men with the ministers, only one of the ministers always presides in his course. This presbytery assembles once every week, at whose meeting is always present a delegate from the Prince, to see that nothing be agitated there which it concerns not the presbytery to meddle withal. This presbytery hath no power to excommunicate or inflict any church censure; but if any person be accused to them of any crime, they send him to the jurisdiction to whom he appertains, to enquire into his offence. The court, having received this information from the presbytery, either neglect it if they please, or, if they see cause, enquire into it, and punish the delinquent according to his demerit; and, in the close of the sentence or warrant for execution, add this clause, *Quod ad Scandalum Ecclesiæ datum remittimus te ad Presbyterium*. Now at last, all they can do, is to exact of him a publick confession before the church, and a promise of amendment for the future. As for ordination, it is given by the council of four by imposition of hands, after examination of the person to be ordained, and testimonials exhibited from the university, or other persons of known credit. The Prince receives all tythes, except such as in some places, for conveniency's sake, are paid immediately to the ministers, and other church revenues, most whereof is paid out again in stipends to the ministers, which the Prince proportions according to their merit and his own discretion; the rest is reserved for emergencies.

July 25. We hired a coach for *Straßburg*, which brought us thither in three days. At three miles distance from *Heidelberg* we passed in sight of *Philipsburg*, *Philipsburg*, a well fortified place situate in a level near the *Rhine*, now possessed by the *French*. The castle or palace yielded a goodly prospect. A mile further we passed through *Grafse* a small town with a castle belonging to the margrave of *Tourlach*, where our coachman paid toll. We lodged this first night at a village called *Linknm* under the same lord, who is a *Lutheran*.

July 26. At four miles end we bailed at a large village called *Raspach*; and two miles on further we passed through *Stolehoven* a little walled town, where our coachman paid another toll; and after one mile more another walled town called *Lichtenau*, both under the *Lichtemarquess*.

marquess of *Baden*. This second night we took up our quarters at *Sertz*, a village under the earl of *Hanaw*.

July 27. We passed over the *Rhine* divided into two branches or streams by two great wooden-bridges, which instead of boards are floored with whole fir-trees laid loose across, neither pinned nor nailed down: I conceive that the bridge might upon any exigent be more suddenly thrown down and broken. Soon after we were past the bridges we entred *Strasburg*. In this journey we observed great plenty of *Maiz* or *Indian* wheat planted; in some places *Lathyrus sativus*, and in others *Carthamus* or bastard saffron sown in the fields: growing wild besides what we had before observed in other places, *Blattaria*, *Solidago Saracenicæ*, and in the meadows near *Strasburg*, *Carduus Pratinfis Tragi*.

Strasburg. *Strasburg* is a free city of the empire, large, well built, rich, and populous, encompassed with a double wall and trench full of water, besides the advantage of a good situation in a large level, very exactly fortified, and the walls and works most regular, elegant, and scrupulously kept in repair: so that it seems no easy thing by force to take this city; neither was it I think once attempted in the late *German* wars. It lies as a block in the *Frenchmens* way, and is as it were the rampart of the empire in these parts. The government is by a greater council of 300, chosen by the several companies of citizens, and a lesser of 71, of which number six are *Burgmesters*, six *Stetmesters*, 15 *Patres Patriæ*, and 13 of the *Militia*. The women of this city are well-favoured and of good complexions. The inhabitants are most part *Luthenans*, who have seven churches: some *Papists*, who have one church and four cloisters, two for men and two for women; and a few *Reformed*, who yet are not allowed a church in town, but forced to go some two miles to church in the territory of the earl of *Hanaw*. This city is an episcopal see, the bishop whereof is lord of the lower *Alsatia*. He hath a palace in the city, but is not suffered to lodge therein above three days together; in an inn he is allowed eight days at a time. Here is the fairest, largest, best furnished, and handsomeliest kept armory or arsenal that we saw in *Germany*, or in all these respects any where else.

elle. Here are also publick granaries, wine-cellars, and store-houses. The river *Elle* runs through the town. The *Domo* or cathedral church is a fair building of stone, having a great pair of brass folding-doors at the west end. Herein we viewed the famous clock described by *Coryat* and others, a piece of excellent workmanship, made, as we were told, by one *Isaac Habrechtus* of *Strasburg*. The steeple of this church is curiously built of carved stone, and incomparably the highest that ever we yet saw. The number of steps from the bottom to the top is 662. We ascended 640 steps to the place called the Crown, from whence we had a wide prospect of the country round about. In this steeple two men watch constantly by day and four by night. Ten hours distant from *Strasburg* towards *Stutgard* is *Sourebourn*, from whence acid water is brought hither, Soure-
bourn. which they mingle with their wine and drink as at other places. By the inhabitants of this and other imperial cities, especially the women, are many different sorts of habits used.

July 31. We left *Strasburg* and began our journey towards *Basil*, travelling as far as *Truelfheim* a village under the bishop of *Strasburg*, some two miles and half. August 1. After three miles riding forward we passed through a small walled town belonging to the same bishop called *Marklesheim*. Two miles further we rode in sight of *Brisach*, a town seated on a rock by Brisach. the *Rhine* side, a place of great strength and importance, much contended for in the late wars. It is now in the *French* hands, as is all *Alsatia* almost to the walls of *Basil*: and after two other miles we came to a village called *Lodesheim* pleasantly situate in a large plain where we lodged.

Aug. 2. We rode but one league and an half 'ere we arrived at *Basil*. This city is large and fair, the Basil. houses being for the most part built of stone, tall and painted on the outside. It is compassed about with a double wall and trench, rich and populous, built upon hills, so that which way soever you go you either ascend or descend. The river *Rhine* divides it into two parts, which are joined together by a bridge of 14 arches. That part on the north side of the river is called

led *Little Basil*. There are said to be 300 fountains in this city, scarce a street or house of note but hath one. It is one of the thirteen cantons of *Switzerland*, and hath in its territory about 100 villages. It gives title to a bishop chosen by canons, who yet is not suffered to lodge in the town one night. He lives at *Broudint*, keeps the state of a temporal Prince, and coins money, which is not current in *Basil*.

As to the civil government, the citizens are divided into 15 tribes or companies. Each company chuses 12 men by major vote, who are called *Sexers*, because six of them only are regent at once, viz, one six one year, and the other six the next, and so alternately. These twelve *Viri* or *Sexers* chuse out of each tribe two *tsunft-masters*, or *Tribuni Plebis* for their lives. The *Tribuni Plebis* chuse two out of each tribe who are called *Senators*. Of these sixty, and the four heads (two whereof are called *burgomasters*, and chosen by the senators properly so called, and two *Tribuni Plebis* or *Tsunft-masters*, and chosen by the *Tribuni Plebis*) the lesser council consists. Both *burgomasters* and *Tsunft-masters*, tribunes and senators rule alternately. The old senators, or that half of the lesser council which was in power the precedent year, do first debate and agree upon any business of moment before it be propounded to the new senate, who confirm or reject as they please. The great council (which is assembled by the ordinary council upon weighty occasions) consists of all the magistrates, viz. the twelve *Viri*, and all the lesser or ordinary council. The lesser council judges in criminal causes. In this city is an university founded by Pope *Pius II*. The university senate consists of the seventeen professors. The names of the present professors in each faculty, now *Anno 1663*, are,

IN DIVINITY.

Johannes Buxtorfius Professor Veteris Testamenti & Linguae Hebraicae.

Joh. Rudolphus Wetstenius Professor N. Testamenti.

Lucas Kamlerus primarius Pastor & Prof. Controversiarum.

In

IN LAW.

Remigius Fechsius Pandectarum Prof. He has collected many rarities.

Lucas Burchardus Cod. Prof. magnificus Rector.

Jacobus Brandmallerus Institut. Prof.

IN MEDICINE.

Emmanuel Stupanus Med. Theor. Prof.

Joh. C. Baubinus pater, Praxeos Prof.

Hieronymus Baubinus F. Anatomæ & Botanices Prof.

Of these two the father is the son, and the son consequently the grand-child of that famous herbarist and anatomist *Caspar Baubinus*.

IN PHILOSOPHY and Human Literature.

Christophorus Fechsius, frater Remigii, Histor. Prof.

Rheinhardus Iselius Ethic. Prof.

Rudolphus Burchardus, cognatus Lucae, Mathem. Prof.

Mr. Henricus Kesselbachius, Phys. Prof.

Fridericus Burchardus, Henrici patrius, Orat. & Eloq. Prof.

Samuel Burchardus, Logicæ Prof. cognatus cæterorum,

Simon Bathienus, Rhet. Prof.

Joh. Zuingerus, Gr. Linguae Prof.

The professors are to read every day in the week in term-time, except *Thursdays* and *Sundays*; their stipends are small, and not a competent maintenance.

Here are no doctors in divinity created beside the professors, and some the condition of whose places require that degree. In *Law*, they confer two degrees, *Doctor* and *Licentiate*; in *Medicine*, only *Doctor*; in *Philosophy*, *Master* and *Batchelor*. The ecclesiastical government is by the three professors of the first faculty, the four *Scholarchæ*, and all the ministers. When a benefice happens to be vacant, the senate nominates three to it, out of

which the ministers chuse one. The city-ministers have a certain stipend in money; in the country-villages the ministers have part of their allowance in tythes, and part in money. No minister, before or after imposition of hands, is obliged by oath or promise to continue his profession so long as he lives, but may leave his ministry when he pleases, and betake himself to some other calling. This and all other the *Protestant* cantons of *Switzerland* are of the *Reformed* religion.

Erasmus. In this city *Erasmus Rot.* lived the latter part of his his time, and here he died and lies buried in the great church, where there is a fair marble monument erected to his memory, against a pillar on the north side of the communion table. He founded and endowed a college in *Basil*, wherein are maintain'd twenty persons, eighteen whereof are to be students in divinity, who may live there as long as they please, provided they follow their studies and continue unmarried: only the magistrates have a power to command them thence to another kind of life. Of the other two one is a bedel, and the other a school-master. Over this college there is a regent, without whose leave no student may lodge out of the house one night. Ten of the students are to be *Basileans*, and ten strangers. At the great church is preserved *Erasmus's* library, called *Bibliotheca Amberbachiana*, because *Erasmus* bequeathed it to *Amberbachius*, by his last will and testament, which we saw written with his own hand in half a sheet of paper, dated the 12. of *Feb.* 1536. In this library are preserved many good pieces and designs of *Holbenius*, a famous painter born in *Basil*: a box full of *Diplomata*, given to *Erasmus* by the Pope, Emperor, and several Kings and Princes of *Europe*: *Erasmus's* seal and ring: a fair gold medal sent to *Erasmus* by the King of *Poland*: many antient and modern coins and medals: three *Rappers* (*i. e.* small pieces of money of a mix'd metal not so big as a silver penny of the value of a farthing) turned into gold by *Leon. Turnitius*, a famous alchymist of this place, who turned the nail at *Florence*: several antient *Entaglie*: many papers of *Amberbachius* concerning the antiquities of *Augusta Rauracorum*, formerly a great city, now a village called *Augst*, not far distant from *Basil*. The great church or cathedral at *Basil* was built

Bibliotheca Amberbachiana.

built by the Emperor Henry II. who married Cunigunda the daughter of an English King. St. Pantalus an Englishman, was the first bishop here. The graver sort of citizens and magistrates wear ruffs and steeple-caps. The professors and ministers wear the same caps and ruffs, and besides short gowns, which reach little lower than their knees. Many of the country-boors wear straw-hats. The women wear their coats very short, and some of them little round caps on their heads, very like the young scholars caps in Cambridge, but less; and a tin-girdle about their waists. We saw in this city Dr. Fel. Platerus's Musæum or cabinet, wherein there is a good collection of minerals, stones, metals, dried fishes, and other natural and artificial rarities, gathered by Tho. Plateus the father, and Fel. Plateus the son, and disposed in a good method, the names being set to each one. Here and at Zurich are sermons every day in the week at several churches.

David George, that monstrous fanatic, died in this city, at whose death there happened a great tempest of thunder and lightning, and a thunder-bolt brake into his house.

About Basil we found growing wild, beside what we had before met withal, *Scrophularia Ruta canina dicta*, *Passerina Tragi* among the corn. *Phalangium parvo flore ramosius*, *Blitum minus album* J. B. in fimetis. *Cymbalaria Italica hederacea*, in muris urbis ad portam quæ Argentinam ducit, *Stœbe major calyculis non splendentibus*, in marginibus agrorum & muris passim toto itinere à Frankendaliâ ad Basileam usque. *Polium montanum Lavendulæ folio*, *Consolida media Genevensis* J. B. & *Cneorum Matthioli seu Thymelæa minor Cordi*. But if any one desires a more particular account of what plants grow wild about Basil, C. Bauhinus's *Catalogus Plantarum circa Basileam nascentium* will give him full satisfaction.

August 10. From Basil we set forward for Zurich. At the end of one Dutch mile we passed Augst, supposed to have been *Augusta Rauracorum*. There we view'd the ruins of an antient building, judged by *Amberbachius* to have been an amphitheater. Next we rode fast by a walled town on the Rhine subject to the archduke of Inspruck. On the hills hereabout we first saw fir-trees

growing wild. Then we passed through *Bruck* a pretty little walled town, having one handsome street well built with tall houses of stone, and fountains in the middle, and lodged at the baths of *Baden* six miles distant from *Basil*. This day we first took notice of the little green tree-frogs. The baths here are said to be sixty in number, but small; the water is very hot. *Baden* is a walled town, seated on the side of a hill by the river *Limagus*, about half an *English* mile distant from the baths. Here the delegates of the thirteen cantons meet and sit. The poor people put a cheat upon strangers, bringing them to sell, as they pretend, *fossile dice*, which they say, they dig out of the earth naturally so figured and marked. But I am well assured, such as they brought us were artificial dice, and, if they digg'd them out of the earth, they first buried them there themselves. From *Baden*, Aug. 11. We rode along by the *Limagus* on one hand, and fair vineyards on the other to *Zurich*.

Zurich.

Zurich is pleasantly situate at the end of a lake called *Zurich-sea*, scarce so big as *Basil*, but I think more populous. The river *Limagus* which runs out of the lake divides it into two almost equal parts, which are joined together by two bridges; one very broad for carts and horses to pass over.

The houses are built of timber with clay-walls, handsomely painted, many of them four or five stories high. The streets are narrow but well paved with flints and great pebbles. This city is as well fortified as the situation of it will permit, besides the wall, being encompassed round with good earth-works and trenches after the modern fashion. The river *Sale* runs by and gives defence to it on the south-side, and a little lower empties itself into the *Limagus*. The citizens are given to merchandise, all very busy and industrious. They either are rich or at least so esteemed, and therefore envied by their neighbours of the *Romish* religion. Here are no guards of soldiers at the city gates; no strangers examined or search'd, either at coming in or going out. We observed the colour of the water of the *Zurich-sea* to be greenish and well approaching to that of sea-water. Afterwards we found the water of all the lakes and rivers near the *Alps* to be of the same colour, at which we were not
a little

a little surpris'd. For we were wont to attribute that colour in the sea-water to the mixture of salt that is in it, whereas the water of these lakes and rivers discovers to the taste nothing of salt or brackish. But afterwards, considering that these waters did consist for the most part of snow dissolved, and that snow is supposed to contain good store of nitrous salt, we thought it not altogether improbable that this colour may be owing to the nitrous particles remaining in the water, though they be not copious enough to affect our taste, and it would be worth the while to distil good quantities of this water, to see whether it would leave any salt behind.

That these lakes and rivers do consist for the most part of snow-water it is manifest, for that upon the mountains, excepting the lower parts of them, no rain falls in winter-time, but only snow, with which the higher parts of them are covered to a great thickness for at least six months in the year; and for that the rivers that flow from the *Alps* run lowest in winter, and abound most with water in the summer-time; so that sometimes they overflow their banks in the hottest months of the year, and when no rains falls; as myself can testify concerning the river *Rhodanus*, because the sun at the season melts the snow upon the mountains. Hence it appears, that their opinion was not so absurd who attributed the yearly increase and over-flowing of the river *Nilus* to the dissolution of the snow upon those mountains where it hath its first rise. Though I do not think this to be the true cause, partly because that part of the earth where those mountains lie is so hot, by reason of its situation under the direct and sometimes perpendicular beams of the sun, that it's not likely any snow should fall, much less lie there: chiefly because travellers generally agree, that, in most parts of that climate where those mountains lie, there are at that time of the year great falls of rain, to which therefore the over-flowing of *Nilus* is more probably attributed.

The government of this city is by a greater and a lesser council. The lesser council consists of fifty, viz. twenty four tribunes or masters of the companies chosen by the twelve tribes or companies, into which the city is divided, two by each company. These twenty four are called

*Zwelve*s, because twelve of them only are regent at once. Twelve senators, chosen out of the companies, one out of each company by the greater council according to our information, according to *Simler* by the lesser. Six, elected by the same greater council as we were informed, but according to *Simler* by the lesser, out of the people indifferently where they please; four *Tribuni nobilium*; chosen by the gentlemen; two *Senatores nobilium*; and two *burgomasters* or consuls chosen by the council of 200. The consuls and half this council rule by turns, viz. twelve *Zwelve*s and twelve *Senators* with one consul one half year, and the other half the next; and this half that rules is called *Concilium novum*. All the fifty meet every week, and, if any decree be to be made, it is dated in the presence of the *Concilium novum & vetus*. All the fifty hear civil causes, *Simler* saith eight chosen by the fifty; and the *Concilium novum* judge in criminals alone. The greater council consists of 200, viz. 144 elected out of the tribes, twelve out of each tribe; eighteen chosen by the noblemen among themselves; twenty four *Zwelve*s; four *Tribuni nobilium*; two *Senatores nobilium*; the six elected indifferently, and the two *burgomasters*. Why the twelve chosen by the greater council should be left out, we know not, and therefore suspect our information was not good, about the making up the great council; but of the twelve out of each tribe, and eighteen out of the noblemen, we are sure. This great council chuses *Landvoghts*, and assembles upon important occasions that concern the whole common-wealth. They elect four *Stadtholders* or Proconsuls out of the twenty four masters of the companies; two *Sekelmasters* or Treasurers either out of the twelve senators of the companies, or the twelve tribunes of the *Concilium novum*. Half the lesser council is chosen every half year at *Christmas* and *Midsummer*. The *Concilium vetus* goes out, and then the *Concilium novum* becomes *vetus*, and chuses a new *Concilium novum*, but for the most part the same are chosen again.

Schauff-
haussen.

August 12. From *Zurich* we travelled to *Schaffhausen*, passing by a great cascade or cataract of the river *Rhine* called *Wasserfall*; near to which we first observed *Orobasis sylvaticus purpureus vernus* and *Hepatica nobilis* growing wild.

wild. This journey we also found *Ulmaria major* five *Barba capri*, by a little bridge not far from *Schaffhausen*.

Schaffhausen is seated upon the river *Rhine*, over which there is here a bridge, part of wood and part of stone. All boats or flotes that come down the river must here unload, there being no passing further by reason of great stones in the channel, and the precipitious descent of the water at *Wasserfall*. This town is well built, the houses being most of stone, walled about and intrench'd. It hath two fair streets handsomely paved, besides many other small ones. Here, as at *Zurich*, the citizens when they walk abroad wear their swords. As to the civil government, the citizens are divided into twelve tribes or companies. Each tribe chooses two *Tribuni Plebis*, and these 24 make the lesser, or ordinary council. The great council consists of these and sixty more, chosen also by the companies, each company choosing five. The father and son, or two brothers, cannot be together of the council. By the greater council are chosen yearly two consuls or burgomasters, two quæstors, one proconsul, and one *Ædilis*, but for the most part they choose the same. All causes civil and criminal are tried before the lesser council. Every one of the twenty-four hath 52 florins and nine *modii frumenti* allow'd him yearly.

August 13. We rode to *Constance*. By the way we found *Hornimum luteum glutinosum* sive *Colus Jovis*, and in a wood, upon a mountain, *Pyrola folio mucronato serrato*, *Pseudoasphodelus Alpinus*, *Anonymus flore Celitææ*, & *Sonchus coeruleus latifolius*. *Constance* is an imperial city pleasantly situate in a fair level by the *Rhine* side, and at the end of the *Bodenzee*, or lake of *Constance*, called *Bodenzee*. antiently *Lacus Brigantinus*, and *Lacus Aconius*. There is a long bridge over the river or lake, made part of wood and part of stone. The streets of the city are fair, and the buildings of stone. The council that was held here *Anno Dom. 1417*, at which *John Hus* was condemned, hath made this place well known. For what end this council was assembled, and what they did, the following inscription on the council-house will acquaint the reader:

Gaude

*Gaude clara Domus, pacem populo generâsti
 Christicolæ, dum Pontifices tres Schismate vexant;
 Tunc omnes abigit Synodus quam tu tenuisti.
 Ipse sedem scandit Martinus nomine quintus
 Dum quadringentos numerant post mille Salutis
 Festo Martini decem & septem simul annos.*

This town is also famous for the resistance it made to the Swedish forces commanded by Horn, besieging of it Anno 1598. vid. Galeazzo.

Yet it seemed to me but slenderly fortified, having toward the water only a wall, and toward the land an earthen rampart, or wall and ditch, drawn at a good distance from the stone-wall. It hath indeed advantage by its situation, having a lake on one side and a fenny level on the other.

Lindaw. Aug. 15. We took boat, and crossed the Bodenzee from Constance over to Lindaw, and by the way had a fair prospect of the strong town of Oberlingen. Lindaw standeth in the middle of the lake environ'd with water. It is joined to the land by a bridge of 290 paces, one half of it being stone, and the other, that is, that next the town, wood, which may upon occasion easily be taken down and removed. This city, besides its natural strength by reason of its situation, is also artificially fortified with stout walls and bulwarks standing in the water, that side most which is nearest the land. On that side toward the lake are many rows of great stakes driven into the ground, to hinder the approach of any boat or vessel to the town; so that a man would think this place impregnable. The streets and houses are not so spacious and fair as those of Constance, yet proper enough: several fountains also there are in the streets. Towards the Bodenzee are two walls, and between the walls a large vacant space of land wherein vineyards are planted, of the grapes whereof are said to be made yearly 100 fudders, that is, 300 English hogheads of wine. Eight villages belong to this city, their territory extending about three hours.

For plants we found, not far from Lindaw in the mountainous woods, *Erica procumbens herbacea*, *Scabiosa latifolia*

latifolia rubro flore, *Gentiana Asclepiadis folio*, and in the moister places, *Ulmaria major* sive *Barba capri*, & *Lactuca montana purpuro-cærulea major* C. B. In the moist meadows *Pneumonanthe* plentifully. On the banks of a small river running into the *Badensee* near *Lindaw*, *Myrica sylv. altera Clus.* In the moist and fenny places near the lake both here and at *Constance*, *Gratiola vulgaris* plentifully.

Aug. 17. We rode post from *Constance* towards *Munchen* in *Bavaria*. The several stages where we changed horses were (1.) *Wangen*, a small imperial town, two *Wangen*. miles distant from *Lindaw*. (2.) *Laykirk*, another small *Laykirk*. imperial town, two miles further on. (3.) *Memmingen*, *Memmin-* a free city of the empire, and one of the chiefest of *Sue-gen-* *via*, both for greatness and strength. The streets are broad, water running thro' them. (4.) *Mundelheim*, a *Mundel-* small town under the Duke of *Bavaria*, where we *beim*. lodged. (5.) *Lansberg*, a pretty town, with a handsome *Lansberg*. fountain in the market-place, built in 1663. four *Ger-* man miles from *Mundelheim*. From hence we rode thro' no considerable town till we came to *Munchen*, passing by the *Ammersee*, a great lake about three *Ger-* *man* miles in length, where we had the *Alps*, or some lake. very high mountains in prospect.

All strangers that enter *Munchen* are first strictly exa- *Munchen*. mined at the gate, their names sent in to the governor, and they detained till the return of the messenger with leave for their admission. This city is very strongly walled and fortified, and, for the bigness of it, is the most splendid and beautiful place we have seen in all *Ger-* many; so that well might *Cluverius* term it *omnium Ger-* *manicarum pulcherrimam*. The streets are broad and streight, adorned with sumptuous churches and cloisters, and stately houses. Above all, the Duke's palace deserves respect, not to say admiration, it being the most magnificent and sumptuous edifice for a house, that we have any where hitherto seen beyond the seas. In the great garden of this palace we saw many rare plants, among the rest we especially took notice of the *Aloe-trees* (for so I may well call them, for the greatness and height of their stalks which shoot up in one year) of which there were more, I verily think, in this one garden,

garden, than in all *Europe* besides; I mean of such as came to stalk and flower. In this city, so far remote from our native country, it seemed strange to us to find a cloister of *English* nuns. We thought it worth noting, that the bodies of the churches here are fill'd with pews and seats, as ours in *England*, whereas generally in the churches of the *Roman-Catholicks* there are no fixed seats, or but very few; the people either standing to hear their sermons, or sitting on moveable benches and stools, that so when the sermon is ended, the body of the church may be again cleared. Having viewed *Munchen*, the nearness of *Augsburgh* invited us thither, where we arrived *August 21.* having passed by the way a pleasant little town belonging to an abby of *Bernardines*, called *Pruck*; and after that a little walled town seated on a hill, called *Fridberg*.

Augsburgh *Augsburgh* is a great city about eight miles in compass, well walled and trenched about, standing upon the river *Lech*; the houses for the most part well-built, the streets adorned with several stately fountains: the armory comparable to that of *Strasburgh*, consisting of twelve rooms filled with arms and weapons of all sorts; the Stadthouse, next to that of *Amsterdam*, the fairest and most stately of any we have yet seen; in which there is one upper room, or chamber, very large and high-roofed, paved with marble, richly gilt and painted both roof and walls, and in all respects scarce to be parallel'd. The citizens are divided between *Papists* and *Lutherans*, these latter being esteemed double the number of the former; yet have they seven cloisters of men, and five of women, whereof one *English*. Very few *Reformed* here. This is a free city of the empire, and governed by its own magistrates. It seems to me at present, for the bigness, not very populous, and is, I believe, somewhat decayed and short of what it hath been, both as to riches and multitude of inhabitants; which may be attributed to the losses and injuries it sustained in the late wars. In a large plain not far from *Augsburgh*, over which you pass going thence to *Munchen*, we observed many rare plants, viz. *Tithymalus verrucosus*, *Trifolium pratense album à Fuchsio depictum* siue mas J. B. *Pseudo-asphodelus Alpinus* C. B. *Thlaspi clypeatum asperifolium* seu *biscu-*

biscutatum; *Horminum* sylv. *latifolium* Ger. *Phalangium* parvo flore non ramosum C. B. *Carlina herbariorum* Lob. *Gentianella Autumnalis* flore cæruleo quinquefolio, calyce pentagono grandi. Floris tubus è calyce non eminet, ut in hujus generis aliis; sed folia tantum expanduntur supra margines calycis, ut in *Caryophyllis*. *Gentianellæ* species minima flore unico cæruleo elegantissimo, an minima Bavarica? *Linum sylvestre latifolium* caule viscoso flore rubro CB. fortè. Folia habet pilosa, acuminata, modicè lata, nervis quinque per longitudinem decurrentibus, longitudine foliorum Lini: flos quinquefolius, coloris incarnati, ut vocant, saturatioribus & velut sanguineis lineolis striatus; Radix lignosa est, & per plures annos durare videtur. *Cirsii* seu *cardui* duæ species: Priori flos *Cirsii* nostri Anglicani flori simillimus, & in uno caule plerunq; unicus; verum folia pallidè sunt viridia, profundè laciniata & spinulis horrida, ad modum fere *cardui* viarum vulgatissimi: alteri, quæ jam defloruerat, folia viridia, non laciniata, breviora & latiora quàm præcedenti, in ambitu spinosa, & *Hyoseris* masculi foliis figurâ suâ nonnihil similia. *Saxifraga Venetorum*, *Daucus montanus Apii* foliis, flore luteo; Another sort of umbelliferous plant very like to the figure of *Caucalis Peucedani folio*; *Lotus siliquosa lutea Monspeliensis* J. B. near the river *Lech*, as also *Bellis cærulea Monspeliaca* Ger. *Dorycnio* congener planta; *Thalicttrum angustissimo folio*. By the wayside near the city in sandy ground *Rhamnus primus Diascoridis*; and all about in stony places *Caryophyllus gramineo folio minimus*; not to mention those that we had elsewhere seen, v. g. *Aster Atticus Italorum* flore purpureo; *Mezereon Germanicum*, *Asclepias* flore albo, *Anonymus* flore Coluteæ, &c.

Aug. 28. We departed from Augsburg, and being loth to leave behind us unseen so considerable a city as Nuremberg, which Cluver calls *Germanicarum superbissiman*, we bestowed three days on a journey almost directly backwards to see it. The first day, after the riding of six German miles, we crossed the Danube over a wooden bridge to Donauvert, a pretty town belonging to the Duke of Bavaria, where we lodged. The second being the 29th. of August, we passed through two walled towns, viz. Monheim and Papenheim, and lodged Monheim.

*Papen-
haim.
Weissen-
bergh.*

ed at *Weissenbergh* an imperial town of some note, the inhabitants whereof are all *Lutherans*; it is five miles distant from *Donauert*, Nigh this town is a strong fort built upon a hill, belonging to the marquess of *Anspach*, who is also a *Lutheran*.

Pleinfeldt. The third day being the thirtieth, we passed through a small walled town called *Pleinfeldt*, and at three miles distance we rode close beside another walled town called

Rotte.

Rotte, under the marquess of *Anspach*, and, after two hours riding more through woods of pine, we arrived at

*Nuren-
berg.*

Nurenberg, which city we found to answer if not exceed our expectation, it being the most stately and best built that we have seen in *Germany*. The houses are for the most part of free-stone, and, were they but as uniform as those of the *Low-Country*-towns, *Nurenberg* would not for beauty give place to any one of them. Besides it is rich, populous, and for bigness I think not inferior to the best in *Germany*, though I am not ignorant that in this last respect some give *Collen*, some *Erfurt* the preeminence. It hath under it a large territory, comprehending above 100 towns and villages. The country round about is barren and sandy, and the city far distant from the sea, and standing upon but a small river; notwithstanding which disadvantages, by the industry of the people, it is become one of the best traded and most potent towns in *Germany*. The inhabitants are for the most part *Lutherans*; they seemed to us, in the ornaments of their churches and manner of their worship, more to symbolize with the *Roman-Catholicks* than any other people of that profession we had then observed, The *Papists* are allowed a small church within the walls, but the *Reformed* none. The great *Piazza*, the *Stadt-house*, and other publick buildings deserve remembrance. This town wants not for walls and ditches, being every way well fenced and fortified. Finally, it is an imperial city or free common-wealth, being governed by a senate and magistrates of its own: but of the model or form of government, for want of good acquaintance, we could not get a perfect account.

As for plants, we found no great variety near the city, but, by the way we came from *Augsburgh*, we observed, in several woods near *Papenhaim*, *Caryophyl-
lus*

us flore tenuissimè dissecto. C. B. Not far from Weissenbergh, *Draba lutea siliquis strictissimis* C. B. *Gentianula lanugine ad singulorum foliorum lacinias donata, flore quadripartito* J. B. *Buglossum angustifolium*, *Cytisus Gesneri* cui flores ferè spicati J. B. and a kind of plant like to our Meadow Saxifrage, but taller and larger, An *Seseli pratense* Lob.?

September 3. From Nurenberg we began our journey to Ratisbon or Regensburg. This day we proceeded no further than Altdorf, a little walled town and an university belonging to the Nurenbergers, where there is a pretty physic-garden. This inscription in a cloister in the college contains the history of the founding of this university.

Hoc Pietatis & Doctrinarum omnium laudandum Domicilium inclitus Senatus Noriberg. liberaliter extrui curavit die quæ BB. Petro & Paulo sacra; inauguravit & publicavit, Anno Salutis MDLXXV. imperante D. Maximiliano II. Cæs. Aug. PP. Curatoribus Eccles. & Scholarum Georgio Volcomero, Philippo Geudero, & Hieronymo Baumgraffnero, Oppidiq; Præfecto Balthasare Baumgraffnero. Ades ô Deus & piis conatibus volens propitius fave, ut certè favor exinde numinis eluxit, dum Anno quidem MDLXXVIII. subscribente votis laudatissimi Senatûs autoritate & clementiâ augustissimi & invictissimi Imperatoris Rudolphi II. Curatoribus Hieronymo Baumgraffnero, Vilibaldo Schlisselfeldero, Bartholomæo Poemoro & Julio Geudero in culmen Academicæ Gymnasii evexit: tandemq; Anno Æræ Christianæ MDCXXIII. ejusdem Senatûs desiderium sanctissimum prosperante divinitus amplissimâ indulgentiâ sacratissimi Cæsaris Augusti D. Ferdinandi II. Scholaribus Christophoro Furero, Georgio Christ. Volcomero, Udalrico Grundero & Carolo Schlisselfeldero Universitatis titulo privilegiisque perbeavit. Fac proprium hoc nobis bonum, ô Fons æternæ boni.

In the college are maintain'd 36 students at the charges of the city of Nurenberg, which also pays the professors their stipends. The degrees conferr'd here are doctor of law, physic, and poetry, batchelor of divinity, and

and master of arts. As for plants, there is a double catalogue put out by Dr. *Mauritius Hofman*: one of such as are nursed up and preserved in the physic-garden; the other of such as grow wild near the town; in the composing of which he seems to have taken much pains, so that I believe this catalogue is very full and exact.

Dr. *Hofman* shewed us several *Cornua Ammonis*, or serpent-stones, and some petrified cochle and muscle-shells found in the fields and hop-gardens near *Altdorf*, of which we ourselves the day following as we travell'd from thence to *Nieumarkt*, in some fields we passed through, observed and gather'd up good store. Of these kinds of bodies, I shall here take leave, by way of digression, to discourse a little. And first I shall make a particular enumeration of some of the most remarkable places where they have been found, as well in *England* as beyond the seas, partly of my own observation, partly out of good writers. Secondly, I shall give the opinions of the best authors concerning the original and production of them.

I. First then, those places of *England* which afford plenty of these petrified shells are (1.) *Whitby*, or *White-bay* in the North riding of *Yorkshire*, where (as *Camden* relates in his description of that country) *Lapides inveniuntur serpentum in spiram revolutorum effigie, naturæ ludentis miraculum, — Serpentes olim fuisse crederes quos lapideus cortex intexisset.* Besides these serpent-stones, which he alone mentions, we found there both upon the shores and in the rocky cliffs by the sea-side petrified muscles and *Belemnites* in great plenty. (2.) *Huntley-nabb*, on the same coast, not far from *Whitby* to the northwards, where (as the same *Camden* relates) upon the shores under the cliffs lie stones *varia magnitudine tam affabrè sphaericâ figurâ à natura efformati, ut globi artificis manu in majorum tormentorum usum tornati videantur.* In quibus effractis inveniuntur *Serpentes saxei, suis spiris evoluti, sed qui pleriq; capitibus destituti.* At this place I never was; but, upon the shore at *Whitby*, I observ'd many of this kind of balls, that is, serpent-stones crufted over with or inclosed in another stone, as in their case or *Matrix*, and leaving therein, when broken, their impression; but none of that exact sphaerical roundness he mentions, but rather

rather of a lenticular figure. (3.) *Alderley* in *Glocestershire*, mention'd by the same Author in his description of that county. *Ad fontes Avon fluvii* (saith he) *vix octo mill. pass. à litore in collibus prope Alderley viculum lapides cochlearum & ostrearum specie nascuntur, quæ sive viva fuerint aliquando animantia, sive naturæ ludicra quærant Philosophi naturæ venatores.* (4.) *Kinesham*, or *Cainsham* in *Somersetshire*, not far from *Alderley*, so called (saith *Camden*) from *Keina*, a holy British virgin, quam serpentes in lapides mutasse superioris ævi credulitas multis persuasit, eò quod ejusmodi ludentis naturæ miracula ibi in latomis nonnunquam inveniantur. Videmus enim lapidem hinc delatum serpentis in spiram revoluti effigie, cujus caput imperfectius in circumferentia prominuit, extremâ cauda centrum occupante. Of these serpent-stones we saw several sorts here, and some of that extraordinary bigness, that (as I remember) they were about a foot in diameter. (5.) *Farnham* in *Surrey*, mention'd by *Dr. Merret* in his *Pinax*. (6.) *Richmond* in *Yorkshire*, mention'd by *Camden*. Beside which places myself and friends have seen and gather'd of them at *Lyme* in *Dorsetshire*, *Adderbury* in *Oxfordshire* (which doubtless thence had its name) about five miles distant from *Banbury*, *Bricksworth* in *Northamptonshire*, and in several places near *Daventry*, *Verulam* in *Hartfordshire*, *Shukborough* in *Warwickshire*. And, which is most strange, *Mr. Eyre* of *Highlose* in the *Peak* of *Derbyshire* shew'd us a great lump of them amass'd together by a cement as hard as marble, found in that mountainous country: and *Mr. Martin Lister* assures us, that there are store of them found in *Craven*, the most mountainous and craggy part of *Yorkshire*; and in a discourse of his concerning them, published in the *Philosophical Transactions*, Numb. 76. p. 2283. he mentions for them *Adderton* in *Yorkshire*, thence denominated, *Wansford* bridge in *Northamptonshire*, and *Gunthrop* and *Beauvoir-castle* in *Lincoln* and *Nottinghamshires*.

Besides these petrified shells, there are found in several places of *England* other congenerous bodies, viz. *Star-stones*, by some called *Astroites*; by *Boetius de Boot*, *Asterias vera seu Lapis stellaris*; by *Gesner*, *Sphragis Asteros*; by *Fer. Imperat.* *Stella Judaica*. (2.) *St. Cuthbert's beads*, or *Trochites*; and (3.) *Cap-stones*, or *Echinites*, called by

OBSERVATIONS *Topographical,*

naturalists *Lapides Brontia*. Of the *Glossopetra* I have not yet heard that there have been any found in *England*, which I do not a little wonder at, there being sharks frequently taken upon our coasts.

I. Of those they call star-stones (because they run out into five angles like so many rays as they use to picture stars with there are found at *Shukborough* in *Warwickshire* and *Cassington* near *Gloucester*, where we also have gathered of them. *Camden* mentions a third place, that is, *Beauvoir-castle* in *Lincolnshire*, *sub quo* (said he) *inveniuntur Astroites lapides, qui stellas invicem connexas representant, in quibus radii eminent singulis angulis quini, & singulis radiis cavitas media subsidet*. We have had them also sent us out of *Yorkshire*, but remember not where they were gathered.

II. Those they call *St. Cuthbert's beads* are found on the western shore of the *Holy Island*. This last Summer (1671.) *Tho. Willisell* discovered them in the chinks of the stones in the bottom of the channel of the river *Tees*, which parts *Yorkshire* and the bishoprick of *Duresme*. These are round and not angular like the star-stones. Both (if they be owing to the sea) seem to be the *Spinæ dorsales* or tail-bones of fishes petrified, they consisting for the most part of several plates or pieces sticking together like so many *vertebræ*, though I confess the particular pieces are shorter or thinner than the vertebres of any fish I have as yet observed.

III. The *Echinites* or *Brontia* are found scattered all over *England* of several magnitudes and shapes. I have not heard of any bed of them or great number found in one place. Beyond the seas we have (besides the place which gave occasion to this discourse) found of them at *Brescia* in *Lombardy* on the sides of a hill adjoining to the city: upon the banks of the river *Tanaro* in *Piedmont* four miles below *Aste*, but most plentifully in the island of *Malta*, where we also saw great store of *Glossopetra* or sharks teeth petrified of all sorts and sizes.

For the *Glossopetra*, *Boetius de Boot* lib. 2. cap. 168. saith they are found in the sands near *Daventer* in *Overysse*, and in the allum-mines near *Lunenburgh* in *Germany*. *Goropius Becanus* in *Orig. Antwerp*. 1. 3. saith that they are often digged up in the ditches about *Antwerp*; and found in so great plenty in a hill near *Aken* in *Germany*,

that he thinks it a good argument to prove that they could not be the teeth of sharks: *In colle illo qui Aquisgrano imminet tantum id genus piscium fuisse quis crederet quantum de Glossopetrarum copia conjectari deberet.*

For petrified cochles and other sea-shells, *Geo. Agricola* saith there are found of them in the stone-quarries of *Galgeberg* and those beyond mount *Maurice* in the territory of *Hildesheim* in *Saxony*; and sometimes in the new part of the city itself in digging of cellars and in the town-ditch. (2.) At *Alfeld* in the same *Saxony* between the watch-tower and the town as one goes to *Embeck*. (3.) At *Hanover* in the lime or chalk-stone pits, and near a village called *Lindaw*. (4.) In *Misnia* in the village *Rabschys* near the brook *Trebitia*. (5.) In a certain place of *Prussia* called the *Rose-garden*. (6.) In *Hassia* near the castle of *Spangeberg*. (7.) In *Italy* in a mountain near *Verona*. (8.) In the banks of the river *Elfa*; & *prope oppidum ex Florentinis conditoribus nominatum*. Of these shells amassed together into great stones by a petrified cement are found (as *Pausanias* relates) in the quarries of *Megara*, which kind of stone is therefore called *Conchites*. They are also found in *Thessaly*, *Hemionia*, *Macedonia*, the mountains of *Calabria*, &c. And *Steno* in his *Prodromus* saith, that in those huge stones which lie scattered in some places about the town of *Volterra* (being the remainders of antient walls) there are found all sorts of shells, and not long since in the middle of the market-place there was cut out a stone full of streaked cochles. *Jo. Bauhine* saith that in the slate-stone digged out of the fountain of *Bell*, wherewith the inhabitants covered their houses, there appeared several figures, whereof some represented serpents, some snails, some scallops, some cochles, some muscles, &c. and that there were digged up many petrified shells of cochles, muscles, scallops, periwinkles, *Cornua Ammonis*, &c.

Scaliger Exercitat. 196. Sect. 9. saith, *In saxis Lannarum (tractus est hic Agri Vafatensis) ad pagum qui Cohors dicitur, saxeos cancores multos vidimus, procul à mari phœrrimum, à Garumnâ 30 circiter millia passuum.*

Bernardus Palissius names these places in *France* where petrified shells are found; the suburb of *St. Martial* near *Paris*; the mountains of the forest of *Arden*, especially

OBSERVATIONS Topographical,

near Sedan; the province of *Valois*; the mountains near *Soissons*; the province of *Xantogne* and *Champagne*.

Joannes de Laet in his second book *de Gemmis*, cap. 29. relates how *Bartholomew Morisot* wrote to him from *Dijon* in *Burgundy*, that in a rock near that city, at that distance from the sea, called *le Fort aux Feos*, were found great numbers of stones imitating sea-shells, his words are, *Ubique prostant lapides formâ rotundâ ac striatâ, qui ipsam superinduisse videntur Conchyliorum marinorum materiem, nescio quo sale per infirmiora crescentium lapidum penetrante, paulatimque ita crescente ut ambienti undiq; lapidi uniformem Conchyliorum formam faciat, nisi quod alia aliis majora sint, ita ut si lapidi lapidem attriveris, è medio utriusque conchyliia lapidea erumpant, obversa, transversa, mixta, inæquali quidem proportionem sed formâ unâ, &c.*

The same *Joannes de Laet* gives us another relation from *Jacobus Salmasius* uncle to *Claudius Salmasius* and lord of *Sauvignac*, of great store of these petrified shells found in the stony fields about *Sauvignac*, which I shall here exhibit to the reader in his own words; *Pagus ille Salviniacum uno milliari distat ab Avallono, ut nunc appellatur, vel ut prius vocabatur Aballono, & 3 aut 4 mil. à Vezelio patria Theodori Bezæ. Hujus pagi ager arabilis montosus est & lapidosus totus, qui tamen est feracissimus. In lapidibus illis reperiuntur inserta quasi ex differenti lapidis materia omne genus conchyliia aliquando plura, aliquando pauciora prout est ipsius saxi magnitudo. Visuntur ibi Pectines, Ostrea, Solenes, Cornua Ammonis & alia genera. In toto illo tractu per spatium trium aut quatuor milliarium hæc κογχυλιώδης in agris reperiuntur usq; ad oppidum vel castrum Montis Regalis, nomine Mont-real, cujus ditionis ager confitus est totus hujusmodi lapidibus varias conchyliorum species, partim interius insertas, partim in superficie etiam extantes præferentibus.*

In *Italy* besides the places already mentioned, we were told, that there were found of these shells in the territory of *Modena* in a mountain called *Monte Nicani*, and in the channel of a river near *Udine* in *Friuli* thence called *Rivus miraculorum*, and doubtless in many other places. And for the *Low-Countries*, *Goropius Pecanus* saith, *Apud vicinos nostros Limburgos, Leodios, Chondrusios, Namurcos, Hannones, Atrebatas, Tornacenses, & alios multos, à qui-*
bus

bus vel marmora nobis vel alia lapidum genera advehuntur, non parva est concharum copia & varietas. Vidi in silice durissimo Bethunis advecto, quo viæ apud nos sternuntur, tot conchulas totas lapideas, & conclusis valvulis integras, magnâ ut curâ & arte ex illis fuisse cæmento aliquo compactas judicaretur.

Besides all which places and others mentioned by writers I doubt not but in *Italy, Germany, France, England* and the *Low-Countries* there are many not taken notice of where these bodies might be found, were diligent search and observation made. That they have not been discovered or taken notice of in other parts of *Europe* and in *Asia* and *Africa* is certainly to be attributed to the negligence and rudeness of the people who mind nothing that is curious, or to the want of learned writers who should communicate the histories of them to the world.

I come now to give an account of the opinions of the best authors concerning the original and production of these stones.

II.

The first and to me most probable opinion is, that they were original the shells or bones of living fishes and other animals bred in the sea. This was the general opinion of the antients, insomuch that *Steno* saith, it was never made a question among them, whether such bodies came from any place else but the sea. It hath of late times, and is now received and embraced by divers learned and ingenious philosophers, as in the precedent age by *Fracastorius*, and in the present by *Nicolaus Steno* and Mr. *Robert Hook*, after whom I need name no more to give it countenance and authority in the world. In his *Micrographia*, Observ. 17. He thus discourses concerning these bodies. Examining some of these very curiously figured bodies (found about *Keinsham*, which are commonly thought to be stones formed by some extraordinary plastic virtue latent in the earth itself) I took notice of these particulars.

First, that these figured bodies were of very differing substances as to hardness: some of clay, some marl, some soft stone, almost of the hardness of those stones, which masons call fire-stone, others as hard as *Portland* stone, others as hard as marble, and some as hard as a flint or chrystal,

Next, they were of very differing substances as to transparency and colour; some white, some almost black, some brown, some metalline, or like marcasites, some transparent like white marble, others like flaw'd chrystal, some grey, some of divers colours, some radiated like those long *petrified drops*, which are commonly found at the *Peak*, and in other subterraneous caverns, which have a kind of pith in the middle.

Thirdly, that they were very different as to the manner of their outward figuration: for some of them seem'd to have been the substance that had filled the shell of some kind of shell-fish; others to have been the substance that had contained or enwrapped one of these shells, on both which the perfect impression either of the inside or outside of such shells seem'd to be left, but for the most part those impressions seem'd to be made by an imperfect, or broken shell, the great end, or mouth of the shell being always wanting, and oftentimes the little end, and sometimes half, and in some there were impressions, just as if there had been holes broken in the figurating, imprinting, or moulding-shell: some of them seem'd to be made by such a shell very much bruised or flaw'd, inasmuch, that one would verily have thought, that very figured stone had been broken or bruised whilst a gelly as 'twere, and so harden'd, but within the grain of the stone there appeared not any sign of any such bruise or breaking, but only on the very uttermost superficies.

Fourthly, they were very different as to their outward covering, some having the perfect shell both in figure, colour, and substance sticking on its surface, and adhering to it, but might very easily be separated from it, and like other common *cockle*, or *scallop*-shells, which some of them most accurately resembled, were very dissoluble in common vinegar: others of them, especially those *serpentine* or *helical* stones, were covered with, or retained the shining or pearl-coloured substance of the inside of the shell, which substance, on some parts of them was exceeding thin, and might very easily be rubbed off; on other parts it was pretty thick, and retained a white coat or flaky substance on the top, just like the sides of such shells: some of them had large pieces of

of the shell very plainly sticking on to them, which were easily to be broken, or flaked off by degrees: they likewise some of them retained all along the surface of them, very pretty kind of sutures, such as are observed in the skulls of several kinds of living creatures, which sutures were most curiously shaped in the manner of leaves, and every one of them in the same shell exactly like one another; which I was able to discover plainly enough with my naked eye, but more perfectly and distinctly with my microscope: all these sutures, I found by breaking some of the stones, to be the *Termini*, or boundings of certain *diaphragms* or partitions, which seemed to divide the cavity of the shell, into a multitude of very proportionate and regular cells or caverns: these *diaphragms* in many of them I found very perfect and compleat, of a very distinct substance from that which filled the cavities, and exactly of the same kind with that which covered the outside, being for the most part whitish, or *mother-of-pearl* coloured.

As for the cavities between those *diaphragms*, I found some of them fill'd with marl, and others with several kinds of stones, others for the most part hollow, only the whole cavity was usually covered over with a kind of *tartareous petrified* substance, which stuck about the sides, and was there shot into very curious regular figures, just as *tartar*, or other dissolved salts are observed to stick and *chrySTALLIZE* about the sides of the containing vessels; or like those little *diamonds*, which I before observed to have covered the vaulted cavity of a flint; others had these cavities all lined with a *metalline*, or *marcasite-like* substance, which I could with a *microscope* as plainly see curiously and regularly figured, as I had done those in a flint.

From all which, and several other particulars which I observed, I cannot but think, that all these, and most other kinds of stony bodies which are found thus strangely figured, do owe their formation and figuration, not to any kind of *plastick virtue* inherent in the earth, but to the shells of certain shell-fishes, which, either by some deluge, inundation, earthquake, or some such other means, came to be thrown to that place, and there to be filled

with some kind of mud or clay, or *petrifying* water, or some other substance, which in tract of time hath been settled together, and harden'd in those shelly moulds into those shaped substances we now find them; that the great and thin end of these shells, by that earthquake, or whatever other extraordinary cause it was that brought them thither, was broken off; and that many others were otherwise broken, bruised, and disfigured; that these shells, which are thus spirallied and separated with diaphragms, were some kind of *Nautili*, or *porcelane-shells*; and that others were shells of *muscles*, *cochles*, *periwinkles*, *scallops*, &c. of various sorts; that these shells in many, from the particular nature of the containing or inclosed earth, or some other cause, have, in tract of time, rotted and moulder'd away, and only left their impressions both on the containing and contained substances; and so left them pretty loose one within another, so that they may easily be separated by a knock or two of a hammer. That others of these shell-fishes, according to the nature of the substances, have, by a long continuance in that posture, been petrified, and turned into the nature of stone. That oftentimes the shell may be found with one kind of substance within, and quite another without, having perhaps been filled in one place, and afterwards translated to another, which I have very frequently observed in *cochle*, *muscle*, *periwinkle*, and other shells, which I have found by the sea-side. Nay further, that some parts of the same shell may be filled in one place, and some other caverns in another, and others in a third, or a fourth, or a fifth place, for so many differing substances have I found in one of the petrified shells, and perhaps all these differing from the encompassing earth or stone: the means how all which varieties may be caused, I think will not be difficult to conceive, to any one that has taken notice of those shells, which are commonly found on the sea-shore: and he, that shall thoroughly examine several kinds of such curiously form'd stones, will, I am very apt to think, find reason to suppose their generation or formation, to be ascribable to some such accidents as I have mentioned, and not to any *plastick virtue*. For it seems to me quite contrary to the infinite prudence of Nature, which is observable

observable in all its works and productions, to design every thing to a determinate end, and for the attaining that end makes use of such ways as are (as far as the knowledge of man has yet been able to reach) altogether consonant and most agreeable to man's reason, and of no way or means that doth contradict, or is contrary to human ratiocination; whence it has a long time been a general observation and *maxim*, that *Nature doth nothing in vain*: it seems, I say, contrary to that great wisdom of Nature, that these prettily shaped bodies should have all those curious figures and contrivances, which many of them are adorned and contrived with) generated or wrought by a *plastick virtue*, for no higher end than only to exhibit such a form; which he, that shall thoroughly consider all the circumstances of such kind of figured bodies, will, I think, have great reason to believe, tho' I confess one cannot be able presently to find out what Nature's designs are. Thus far Mr. Hook. And Steno agrees exactly with him, and is far more positive and confident; for (saith he) that these shells were once the parts of animals living in a fluid, tho' there never had been any testaceous marine creatures, the very view of the shell itself evinceth, as may be evident by the instance of *bivalve cochle-shells*. Concerning these shells, his observations and discourses are very consonant with Mr. Hook's. One or two particulars not yet mentioned, which may further confirm this opinion, I find in him, *viz.* (1.) That there was found a pearl-bearing shell in *Tuscany*, a pearl yet sticking to the shell. (2.) A piece of the great sea-nacre [*Pinna marina*] in which the silk-like substance within the shell being consumed, the colour of that substance did remain in that earthy matter which had filled the shell. (3.) That about the city of *Volterra* there are many beds of earth not stony, which do abound with true cochle-shells that have suffered no change at all, and yet they must needs have lain there above 3000 years; whence it is evident, that part of *Tuscany* was of old time covered with the sea; and why then might not as well all those other places where these petrified shells are found.

Against

Against this opinion lie two very considerable and material objections, which I shall here propound.

First, It will hence follow, that all the earth was once covered by the sea, and that for a considerable time; for there being found of these shells in the middle of *Germany*, at least 200 miles distant from any sea, as as myself can witness, nay, upon the highest mountains in *Europe*, even the *Alps* themselves, as may be proved by sufficient authority, the sea must needs have covered them, and consequently, the water keeping its level, all *Europe* and the world besides. Now that ever the water should have covered the earth to that height, as to exceed the tops of the highest mountains, and for a considerable time abide there, is hard to believe, nor can such an opinion be easily reconciled with the scripture. If it be said that these shells were brought in by the universal deluge in the time of *Noah*, when the mountains were covered, I answer, that that deluge proceeded from rain, which was more likely to carry shells down to the sea, than to bring any upwards from it. But because some argue from what the scripture saith, [*The fountains of the great deep are broken up,*] that the deluge proceeded partly from a breaking forth and overflowing of the sea, and consequently might bring in these shells: to that I answer, that had it been so, such a flood would have been more likely to scatter such shells, as it brought in indifferently all over the surface of the earth, than to lay them in great beds in particular places: such beds seem to have been the effect of those animals breeding there for some considerable time. If it be said, that those mountains where such shells are found might at first have been low places, and afterwards raised up by earthquakes, that seems not likely, because they are found upon so many mountains, unless it be said, that all mountains were at first so raised, and then the former difficulty will recur, and it will follow, that before the raising of the first mountains, the whole earth was covered by the sea. Besides, this *hypothesis* seems to me in itself improbable, for that tho' there be mention made in histories of some such mountains raised by earthquakes, yet

yet they are but very few, and of no considerable height or greatness, compared with those chains of high and vast mountains, the *Alps*, *Pyrenees*, *Appennine*, *Taurus*, *Caucasus*, *Imaus*, *Hæmus*, *Atlas*, &c. In general, since the most antient times recorded in history, the face of the earth hath suffer'd little change, the same mountains, islands, promontories, lakes, rivers still remaining, and very few added, lost, or removed. Whence it will follow, that if the mountains were not from the beginning, either the world is a great deal older than is imagin'd or believed, there being an incredible space of time requir'd to work such changes as raising all the mountains, according to the leisurely proceedings of Nature, in mutations of that kind, since the first records of history: or that in the primitive times, and soon after, the creation of the earth suffer'd far more concussions and mutations in its superficial part than afterward.

II. Among these petrified shells are many sorts, which are not at this day that we know of any where to be found: nay some proceed so far as to affirm, that there is not the like to any one of these supposed petrified shells to be found among our present shell-fishes. If it be said, that these species be lost out of the world: that is a supposition which philosophers hitherto have been unwilling to admit, esteeming the destruction of any one species to be a dismembring the universe and rendring it imperfect, whereas they think the divine providence is especially concerned to preserve and secure all the works of the creation. Yet granting that some few species might be lost, it is very unlikely that so many should, and still more unlikely that such as were so diffused all over *Europe* and found in so many places; but most of all that a whole *Genus*, of which there were so many several species, and those scattered in so many distinct and from each other remote places, should be so utterly extinct and gone, at least out of our seas, that there should not one in an age be found. Such are, for example, the *Serpentine* stones or *Cornua Ammonis* supposed originally to have been *Nautili*, of which I myself have seen five or six distinct species, and doubtless there are yet many more. Add hereunto the greatness of some of these shells, viz. the *Cornua Ammonis*, whereof

whereof there are found of about a foot diameter, far exceeding the bulk of any shell-fish now breeding or living in our seas.

The second opinion is of those who imagine these bodies to have been the effects and products of some plastic power in the earth; and to have been formed after the manner of diamonds and other precious stones, or the crystals of coagulated salts, by shooting into such figures. Of these bodies my very ingenious and learned friend Mr. *Martin Lister* discourses in a Letter of his inserted in the *Philosoph. Transact.* numb. 76. to this purpose, upon occasion of Mr. *Steno's Prodrômus*. We will easily believe, that in some countries, and particularly along the shore of the *Mediterranean sea*, there may all manner of shell-fishes be found promiscuously included in rocks or earth, and at good distances too from the sea. But for our *English* inland quarries, which also abound with infinite numbers and great varieties of shells, I am apt to think there is no such matter as petrifying of shells in the business (or as *Steno* explains himself, pag. 84. in the *English* version & *alibi*, that the substance of these shells, formerly belonging to animals, hath been dissolved or wasted by the penetrating force of juices, and that a stony substance is come in the place thereof) but that these cochle-like stones ever were as they are at present, *Lapides sui generis*, and never any part of an animal. That they are so at present is in effect confessed by *Steno* in the above cited page; and it is most certain, that our *English* quarry-shells (to continue that abusive name) have no parts of a different texture from the rock or quarry they are taken, that is, that there is no such thing as shell in these resemblances of shells, but that iron-stone cochles are all iron-stone, lime or marble all lime-stone and marble, spar or crystalline shells all spar, &c. and that they never were any part of an animal. My reason is, that quarries of different stone yield us quite different sorts or species of shells, not only one from another (as those cochle-stones of the iron-stone quarries of *Adderton* in *Yorkshire* differ from those found in the lead-mines of the neighbouring mountains, and both these from that cochle-quarry of *Wansford-bridge* in *Northamptonshire*, and all three from those to be

be found in the quarries about *Gunthorp* and *Beauvoir-castle*, &c.) but I dare boldly say from any thing in Nature besides, that either the land, salt, or fresh waters do yield us. 'Tis true that I have picked out of that one quarry of *Wansford* very resemblances of *Murices*, *Tellinæ*, *Turbines*, *Cochleæ*, &c. and yet I am not convinc'd, when I particularly examined some of our *English* shores for shells, as also the fresh waters and the fields, that I did ever meet with any one of those species of shells any where else but in their respective quarries; whence I conclude them *Lapides sui generis*, and that they were not cast in any animal mould whose species or race is yet to be found in being at this day. Thus far *Mr. Lister*. The like argument also *Goropius Becanus* uses to prove, that these bodies are not petrified shells. *Scallop-shells* (saith he) are so rare upon the shores of *Flanders*, that they are brought thither by pilgrims from the coast of *Gallicia* in *Spain*, and shown for strange things; and yet in the ditches about *Antwerp* there is such plenty of them, that in digging there they throw up heaps of them like little mountains, so that he that would gather of them need not take the pains to travel to *Gallicia*, or so much as to the sea-shores. To these he adds another argument which yet to me seems of little force. In some places about *Antwerp* digging for water, they meet with in the earth a crust or layer of two foot thickness and in some parts thinner, wholly made up of sea-shells, whereas there was never found such a mass of shells upon any of the sea-shores; so that no man can reasonably assert that they were thrown up by the sea and there left, the waters receding and forsaking them; for then without question we should hear of the like heaps or beds of them found on the coasts of *Holland*, *Zealand*, and *Flanders*. But to this I answer, that the reason why at this day there are not such beds of them to be found upon the shores may be, because they are gathered up and carried away by men, partly out of curiosity, partly to burn for lime, or other ways to make use of. Besides we know that in the bottom of the sea, these shell-fishes many times lie in great beds, and there breed in great abundance, and it is not altogether unlikely, that

that the sea might on occasion suddenly recede and desert such beds, and they afterwards come to be buried in the earth.

But to argue further in defence of this opinion. There are found in the earth many such like figured stones which we know not whither to refer, as resembling neither any part of an animal, nor of a plant: such are those that naturalists call *Lapides Lyncei*, *Belemnites*, *Lapides Judaici*, *Trochites*, *Asteria* and others, to which if there be at present any shells, bones, fruits, roots, &c. like, I am as yet wholly to seek for them. And if there are now no such things in being, they that defend the contrary opinion must have recourse to that gratuitous supposition, that such species are lost out of the world.

Besides I have been told by a person of good credit of a stone of this nature resembling a cochle-shell found in the stomach of a beef; where in all likelihood it must be bred and shoot into that figure; which, if true, there can be no reason to doubt, but those in the stone-quarries and other places are so generated.

A third opinion there is, that some of these bodies are really shells petrified, or the cases of such bodies or their contents; and that others of them are stones of their own kind resembling such shells, so shaped and figured by some plastic power. That shells may be, and are sometimes petrified (as are also bones and wood) cannot be denied, and I myself have gather'd such upon the sea-shore; and on the other hand, he that asserts, that there are bodies naturally growing in the earth, which do imitate sea-shells, delivers himself from the trouble of answering the arguments which urge the contrary opinion. But yet methinks this is but a shift and refuge to avoid trouble, there not being sufficient ground to found such a distinction. For my own part, I confess, I propend to the first opinion, as being more consonant to the nature of the thing, and could wish that all external arguments and objections against it were rationally and solidly answer'd.

The names of the professors in each faculty, and what books they read, together with their exercises, the following *Series Lectionum* will acquaint the reader.

Cata-

Catalogus Lectionum atq; Exercitationum Academicarum quas inclytæ Norimbergensium Universitatis Altdorffinæ Professores, cum Deo, post ferias Caniculares hujus Anni MDCC LXII. cœptas usque ad proxime futuram Panegyryn Petro-Paulinam publice privatimq; continuabunt.

*Rectore Mauritio Hoffmanno, M. D.
Anat. Chir. & Botan. Prof. publ.*

*Sub fœlicibus auspiciis virorum nobilissimorum, perstrenuorum atque prudentissimorum Dn. Leonardi Grundherri III. Kiri, Dn. Jodoci Christophori, Kress a Kressen-
heim in Rehelsdorff & Dürrenmungenau, Dn. Georgii Sigismundi Furrers ab Heimen-
dorff & Steinbuhl, Dn. Gabri-*
elis

OBSERVATIONS *Topographical,*
elis Nuzelii ab & in **Sunders-**
bahl, Illustris Reipub. Norimb.
Senatorum, & Curatorum Acade-
miae benemeritissimorum.

SS. THEOLOGICÆ PROFESSORES.

Johannes Weinmann D. Evangelii S. Johannis ἀνα-
 λυσιν eā, quā hactenus usus est, methodo, ad finem us-
 que, divinā opitulante gratiā, continuabit, & præter pub-
 licas disputationes, etiam privata exercitia, cum lectoria,
 tum disputatoria, ex libris Biblicis & locis Theologicis partim
 instituta, partim instituenda, frequentabit.

M. Lucas Fridericus Reinhartus *Controversias ad tex-*
tus Evangelicos Dominicales agitari solitas; tum Exegeticas,
tum Dogmaticas & Morales monstrat, & optimam senten-
tiam, quāpote, confirmat.

M. Joh. Conradus Dürr *Introductionem aphoristicam*
in libros Symbolicos Ecclesiæ Norimbergensis intra vertentem
hunc annum ad finem perducere allaborabit. Gnomologiam
Aristotelicam simul cum interpretatione librorum Nicomachi-
orum pertextet.

JURIS PROFESSORES.

Wilhelmus Ludwell D. à Tit. lib. 4. C. de Oblig. &
 Action. usque ad tit. de Usur. insigniores & difficiliore le-
 ges, adeoque materiam obligationis, probationis & compensa-
 tionis explicare, & si Deus vitam & valetudinem concesserit,
 intra annum absolvere conabitur. Adjectis etiam iis quæ
 ex jure Canonico, & Feudali huc pertinere videbuntur.

Idem cœpta Collegia continuabit, & petentibus nova aper-
 riet.

Nicolaus Ritterhusius D. *Explicationes nobiliorum Legum libri xxviii. ff. & sequentium, publicè continuabit, privatim verò Collegia habebit, unum Institutionum Juris, alterum Historicum.*

Ernestus Cregel D. *Absolutis libri IV. Institut. Impp. titulis XII. ultimis, de integro earum interpretationem aggrediar, & cum studiose, ea præprimis, quæ ad Theoriam spectant, in illis obscura adhuc illustraverim, titulos deinceps in Praxi frequentiores intra sesquiannum, cum Deo, enodabo.*

Ad Publicum Jus quod attinet, meæ in eo sunt defixæ cogitationes, ut illud juxta seriem Juris Civilis, Personarum scil. Rerum & Actionum ubi libro VII. ac VIII. Jurisprudentiæ Publicæ Georgii Braudlacht finis est impositus, xetel ovi segvi tractetur. Privatim quemadmodum explicando ac disputando accuratas Excellentissimi Jcti & fidelissimi olim mei Doctoris D. Joachimi Schnobellii, &c. in Digesta Disputationes impræsentiarum evolvō: ita pro virili, in aliis tam privatis Collegiis, quam publicis circularibusq; Exercitiis qua disputaturis, qua audituris non deero.

MEDICINÆ PROFESSORES.

Mauritius Hoffman D. *Quoad per negotia Magistratus Academici licebit, post absolutas demonstrationes Botanicas, in prælectionibus Anatomicis h. 9. matut. historiam partium corporis fœminini nuperrimè dissecti physiopathologicè explicabit. In Chirurgicis tractatum de Fracturis proponet. Privatim verò Aphorismorum Hippocr. ex naturâ sanguinis interpretationem & singulis mensibus disputationes familiares continuabit.*

Jacobus Pancratius Bruno D. *diebus Lunæ & Martis h. 3. pomer. Institutiones Medicas perspicuè brevitate explicabit. Diebus verò Jovis & Veneris morborum particularium cognitu & curatu difficiliorum tractationem suscipiet, operaque suâ novâ studia Auditorum privatim quoque pro viribus disputando promovebit.*

OBSERVATIONS Topographical,
PHILOSOPHIÆ PROFESSORES.

M. Abdias Trew in *Mathematicis Elementa Euclidis* in *Syllogismos* resoluta repetet. Subjunctis post denas circiter propositiones *Problematicis* ex *Matheſi ſpeciali*, ut ibi *Studiſi ſimul & fundamentorum Mathematicorum rationem*, & eorundem uſum perſpiciant.

In *Phyſicis* deciſionem brevem potiorum & uſum præ reliquis habentium *controversiarum*, nuper inchoatam pertexet.

M. Joh. Paul. Felwinger *Compendium Logicæ* abſolvit: In *Metaphyſicis* tractabit doctrinam *Affectuum* *Enis*: In *Politiceis*, in tractatu de *Magistratu*, perget. *Collegia Logica, Metaphyſica & Politica* aperiet; & *Diſputationes Metaphyſicas* in *Ariſtotelem*, ſi qui futuri ſint *Reſpondentes*, continuabit.

Georgius Matthias König proxime *Syntagma de Viris literatis* ſuo *Orō* auſpicabitur. In *Epistolâ ad Galatas* etiam perget, eaq; finita, ad *Epistolam ad Ephesoſ* ſe conferet.

M. Joh. Leonhardus Schwæger explanabit *Ciceronis Brutum* de *claris Oratoribus*, ejusque *Oratorem*, ſeu de *perfecto Oratore* ad *M. Brutum*: *Characteres* vero, quos hactenus ſub *explicatione textus Virgiliani* ſparſim oſtendit, ac porro oſtendet, in unum etiam ſimul collectos, ubertuſq; dictictos, priorum exemplo excepturis, ad *calamum* dictabit. *Virumq;* per *duces* ab ipſo fiet *hora pomeridiana* *lectura*, atq; inſuper ejus opera ad *Exercitia Oratoria*, tam *publica* quam *privata*, in *proſa pariter ac ligata* petituris parata erit.

M. Chriſtophorus Molitor diebus *Lunæ & Martis* ſpecimen *Philologematum Sacrorum*, juxta ductum *Schickardiani* *horologii* vel *Atrii Diltheyiani* dictabit, diebus autem *Foris & Veneris*, quæ in *Arabiceis* reſtant, continuabit. *Privatum*, ſi futurus eſt juſtus *Auditorum* numerus; *Collegium* tam *Rabbinicum*, quam *Ebraicum* aperiet, in *Rabb.* explicabit & continuabit *Theologiam Talmudicam* *Dn. Hackſpanii*

Moral, and Physiological.

115

spani b. m. In Ebraico vero linguæ fundamenta docebit,
& uti hætenus sic nunquam omittet circulum Oratorium.

Habebuntur præterea, ex Superiorum munificentia, sine
Studioforum sumptibus, quavis hebdomade disputationes,
quas vocant, circulares in Theologica, Juridica, Me-
dica & Philosophica Facultate, necnon singulis mensi-
bus Exercitia Oratoria.

Sept. 4. We proceeded on our journey to *Ratisbon*,
and passed through *Neumarkt*, a little wall'd town be-
longing to the Duke of *Bavaria*.

5. We passed through *Heinmann*, a small wall'd town
subject to the Duke of *Neuburg*; and at night, passing
the river *Danube*, by a fair stone bridge, we enter'd *Ra-
tisbon*, or *Regensberg*, so called from the river *Regen*,
which here falls into the *Danube*.

*Regens-
berg, or
Ratisbon.*

This city is large and well built (the houses being
for the most part of stone) adorned with many fair pa-
laces of noblemen, well wall'd about and fortified. The
streets are but narrow. The roofs of the houses are not
built so steep as at *Augsburgh*, *Nurenburch*, &c. or as
ours in *England*, but flattish after the *Italian* mode. The
Diet of the *Empire* is usually held here, it being an im-
perial city, and govern'd by its own magistrates, though
in the Duke of *Bavaria*'s country. This city hath a bishop,
who is of the *Romish* religion, but he hath little to do,
all the magistrates and the greatest part of the inhabi-
tants being *Lutherans*. Yet some cloisters there are of
monks and nuns, and a college of *Jesuits*.

Upon the rocks, not far from *Ratisbon*, a little be-
low the town on the other side the river, we found, be-
sides many of the rarer sort of our *English* plants, *Asclepias
flore albo*. *Daucus montanus Apii folio major* C. B. *Api-
um montanum nigrum* J. B. *Caucalis Peucedani folio* Ger.
as I take it: It hath a fine leaf, a small root (which I
believe yearly perishes) reddish stalks, an umbel of white
flowers, to which succeed small round seeds with purple
apices: *An Daucus montanus Apii folio, flore luteo* C. B.
It hath winged leaves like to *Bipennella*, but larger, the
several wings of each leaf being as large as and like unto
the intire leaf of the said *Bipennella*; a great root, but

not hot in taste as the Burnet-saxifrages are; the stalk riseth up to the height of a man almost; the seeds are round, striate, cover'd with a hoary down, reddish toward the top, and of a hot spicy taste. *Tithymalus verrucosus* J. B. *Stæbe major calyculis non splendentibus* C. B. *Hepaticum trifolium* Lob. *Flammula Jovis*; *Cerinthe major flore luteo*; *Fraxinella*; *Cytisus supinus sylvest.* *Ratisponensis flor. lut. ad exortum foliorum prodeuntibus* Cat. Aldtdorf. *Cytisus Gesneri cui flores ferè spicati* J. B. *Euphrasia pratensis lutea* C. B. which we first found not far from Heinmaw; *Phalangium ramosum*; *Chamædrys vulgaris* & *Cham. foliis laciniatis*; *Aster montanus luteus hirsuto salicis folio*; *Aster Austriacus* & Clus. i. e. *Linaria aurea Tragi*; *Aster Atticus Italarum flore purpureo* Park. *Oxyacantha sive Berberis*; *Bugula cærulea Alpina*; *Orobanche minor purpureis floribus, sive ramosa*, in the corn-fields. *Chondrilla cærulea* J. B. *Folia huic valdè laciniata, glabra, glauca. Flores longis insident pediculis, dilute cærulei & ad ruborem inclinantes.* *Securidaca dumetorum major flore vario, siliquis articulatis* C. B. which is common all over Germany. *Veronica supina facie Teucrui pratensis* no less common; *Lepidium annuum* growing among radishes; and *Fœnum Græcum*, which I suppose was sown there.

Sept. 11. We hired a boat for Vienna: First, on our left hand as we went down the river, we passed by a little village and a castle standing on a hill, called *Thonastan*. About three miles and half below *Regensburg* we passed in sight of *Wert*, a castle belonging to the bishop of *Ratisbon*, seated on a hill by a river called *Wisent*, which here runs into the *Danube*. This night we lodged at *Straubing*, a very handsome, pleasant, walled town, belonging to the Duke of *Bavaria*, five miles below *Ratisbon*.

Sept. 12. In the morning we pass'd *Pogen*, where is a church standing on a high hill. Four miles below *Straubing*. *Straubing* we rowed under a wooden bridge which there crosses the *Danube*. Here on the left hand as one goes down stands *Dreckendorf*, a walled town belonging to the Duke of *Bavaria*. A little further off we passed by the mouth of the river *Iser*. Then we had a prospect of *Osterheven* on our left hand, and not far thence a small village

village called *Hofkirchen*, and on the same side still a little castle called *Hilkersberg*, where the shores along the river began to be rocky. This night we lodged at a pretty little walled town built of stone, called *Vilshoven*, belonging to *Bavaria*.

Sept. 13. At four miles distance from *Vilshoven* we came to *Passau*, a considerable city for its strength and greatness, formerly well built with many fair stone houses. But about three quarters of a year before our being there, a most dreadful fire burnt down, ruin'd, and destroy'd almost the whole town, churches, publick buildings and all. It is situate just at the confluence of the rivers *In* and *Danube*, and subject to the archduke of *Inspruck*, who, we were told, gave 50000 dollars towards the rebuilding of it. Here is a bridge over the river *In* to a town called *Instat*. Hitherto the river *Danube* flowed gently down, but below *Passau* it began to be streightened by hills on both sides and to run with a swifter stream. Seven miles from *Passau* we passed by *Nayhons* castle, and this third night lodged at a pretty little village belonging to the Emperor called *Asch*, standing on the right side of the river.

Sept. 14. We had an open country again, no hills being near the river. At four miles end we landed at *Lintz*, and viewed the city, which we found to be a very elegant place, well built with stone houses flat roof'd after the *Italian* fashion; having a large square *Piazza* with two fountains in it, and on the highest part a fair palace of the Emperor, whence there is a pleasant prospect of the *Danube* and country adjacent. About three miles below *Lintz* we passed a pretty village on our left hand, called *Mathausen*. Then we had a prospect of a town on our right hand situate upon the river *En* called *Intz*. Seven miles below *Lintz* are hills again on both sides the river. Hereabouts is a village called *Greine*, where the earl of *Lichtenstein* hath a house situate on a hill. Below *Greine*, on the left hand is a little village, where we pass a dangerous place in the river called *Strom*, where the stream being streightened by hills on each hand runs very swiftly, and besides is full of rocks: a little further below a rock, which jets a good way out into the river, we passed a violent whirl-pool called the *Werble*.

At some distance further on the left hand stands a small village under a high hill, half whereof fell down about two years before our being there, which made so great a noise that it was heard two *German* miles off, at *Is*, a little town we passed by on the right hand. We lodged this fourth night at a small village called *Morpbach*, 11 miles from *Lintz*.

Sept. 15. In the morning we went by a rich cloister called *Melk* on our right. At six miles distance from our lodging we passed a fair house of the earl of *Dernstein's* on our left hand, and hereabouts had a prospect of *Ketwein* a rich abby strongly situate on a hill, attempted by the *Swedes* without success. About nine miles from *Marbach* we passed under a wooden bridge by a little walled town called *Stein*, where the *Swedes* (they told us) were notably beaten and driven out again after they had enter'd the town; which repulse they afterwards revenged, when they took the place, by plundering and spoiling it. Not far hence we landed to view *Krembs*, a considerable city seated on the side of a hill, well built, walled about and trenched towards the river. From hence we came into an open country, and the river being at liberty, the channel grew much wider. Six miles below *Krembs* we passed by a small walled town on the right hand called *Deuln*; then we had the prospect of *Greitzenstein*, a castle situate on a hill at some distance from the river on the left hand; next we had a sight of *Coruberg*, a wall'd town in a plain not far from the *Danube*; taken by the *Swedes* in the late wars and by them notably defended against the Emperor. Here and afterward at several other places we observed mills built upon two boats, the wheel lying between the boats, which are fixed at a convenient distance one from the other, and so the stream coming between the boats, and by reason it is streightened by degrees, running more swiftly, turns the wheel. One of the boats is by strong cables or chains at each end fasten'd to the bank, and so the boats mill and all rise and fall with the water. About a mile and half before we reach'd *Vienna*, we went by a fair rich abby called *Claislernaisberg*, with a little wall'd town of the same name; and at the end of nineteen *German* miles, which, the swiftness of the current assisting us, we made this day,

day, we arrived at *Vienna*, the chief city of *Austria*, *Vienna*. and at present the imperial seat, so called from the river *Wien* which runs into the *Danube* on the east side of the town. It is for the bigness of it the most frequent and full of people that we have yet seen beyond the seas. The wall is not above four or five *English* miles in circuit, but there are large suburbs at a little distance from the town, those houses that were very near being lately pull'd down to clear the wall and works for fear of a siege: the *Tures* at the time of our being there having taken *Neu-hausel*, and news coming that they were marching with their whole army towards *Presburg* in *Hungary*, not above forty *English* miles distant from *Vienna*. This city is regularly and strongly fortified with a high and impene- trable wall of earth faced with brick, a broad and deep trench, into which they can (as they told us) when they please draw the water; bastions, half-moons and horn- works, &c. that it is justly reputed one of the strongest holds of *Christendom*. The inner wall, which was said to be built with the ransom of *Richard I.* King of *Eng- land*, is of little strength or consideration in comparison with the new and outer one. The houses are sufficiently tall and well built of stone, the roofs flattish after the *Italian* mode; the streets rather narrow than broad; the markets well stored with all necessaries. Here we first met with tortoises to be sold, at the rate of six-pence a piece: they are found in muddy ditches in these parts. Here also we first took notice of the fruit of *Sorbus legi- tima*; and first saw in the fish-markets the *Silurus* or sheat-fish, the greatest of all fresh-water fish that we have seen, some of them weighing above 100 pound. The Emperor's palace, the cathedral church, and other publick buildings deserve remembrance, were it my design minute- ly to describe places. The Emperor is of a mean stature and dark complexion, thin-visaged, his hair black, his under-lip thick and hanging down a little, much like his effigies on his coin. As for plants we found here-about, *Plants ob-* *Onobrychis spicata* flore purpureo, *Psyllium vulgare*; *Kali* served a- *spinosum*, at this distance from the sea. *Scabiosa folius dis-* *sectis, flore albo vel oxycleuon* Clus. *Dorycnio consenger* na. in great plenty. *Marrubium album angustifolium pere-* *grinum* C. B. as it seemed to me. In the island of *Danubius*

Danubius near *Vienna*, *Aristolochia Clematidis* & *Solanum vesicarium* sive *Alkekengi* plentifully.

Sept. 24. We hired a coach for *Venice* and began our journey thitherward, and this night lodged at a great village called *Trayskerk* four miles distant from *Vienna*: by the way-side we found store of *Abfynthium Austriacum tenuifolium* Cluf.

25. At four miles end we came to *Neufstat* (*Neapolis Austriaca* they call it) well walled and trench'd about, of a square figure, mean bigness, handsomely built, having streight streets and a fair square market-place. At three of the corners are mounts or bastions, and at the fourth a castle. In the lanes near this town I first found *Asperula cærulea*. Two miles beyond *Neufstat* we began to leave the open country and to come among hills. We lodged this night at a village called *Gluknitz*, four miles distant from *Neufstat*. The houses in these villages are for the most part covered with shingles of wood: the hills clothed with woods of pine.

26. After two miles riding we came to a village called *Schadwyen* or *Shadwin*, seated between the mountains and inclosed with a gate at each end. Here we alighted and our coachman hired ten oxen (which stood there ready for that purpose) to draw his coach up a steep ascent to the top of the hills which part *Austria* and *Stiria*. On the sides and top of this hill we found these plants, *Libanotis Theophrasti minor* Park. *Cyclamen autumnale* of two sorts. *Tussilago Alpina folio rotundo*. A sort of small *Trachelium* that I have not elsewhere seen. A small sort of *Muscus clavatus*, with leaves like juniper. *Larix* abundantly. *Lysimachia lutea in alis foliorum florens*. A kind of *Glaux* with a rough cod. *Gentiana folio Asclepiadis* abundantly, and many others that we had before met with. In this journey we also found *Muscus denticulatus major* in the shady lanes in many places: and in watery and springy places *Alfne muscosa* J. B. further on we came to a little wall'd place near the river *Mueretz*, called *Mertzuschlag*. Hereabouts are many mills; and scithes and sickles made here: then we passed through a village called *Langenwang*, where stands a castle on a hill: after that another called *Kriegla*, where we cross'd the river. This afternoon we passed through a pleasant valley

Plants
found on
the hills at
Shadwin.

valley among woody mountains, and at night took up our lodging at *Kimberg*, a large village six long miles distant from *Glocknitz*.

We travelled along the same valley, and passed through 27. a great village called *Kapsberg*; besides many other villages, castles, and gentlemens houses on the sides of the hills, which we rode near to; and at three miles end came to *Pruck an der Mure*, i. e. *Pons Mura*, a fair town for this country, and walled about, having a large market-place with a fountain in it. Proceeding on in the same valley some two leagues further, we passed *Lewben*, a very neat, pleasant and well built walled town, better than we expected to have found any in this mountainous country. It hath a fair market-place with fountains. And we observed much iron lying in the streets, which is here made, and wherewith the inhabitants drive a great trade. Here we crossed the *Mura* twice, and soon after we were past *Lewben* we rode over a hill, and following the course of the said river among the mountains, at evening we came to a village called *St. Michael*, where we lodged. We saw in these parts many men and women with large swellings under their chins or on their throats, called in *Latin* or rather in *Greek*, *Bronchocoele*, and by some in *English*, *Bavarian Pokes*. Some of them were single, others double and treble. This is a disease which these *Alpine* nations have of old been subject to. *Quis tumidum guttur miretur in Alpibus?* Yet among the *Grisons*, who live on the highest parts of the *Alps*, I do not remember to have seen any of these: I dare say there are not half so many thereabouts as in these countries. What should be the cause of this evil, whether the drinking of snow-water, or water infected with the virore steams and particles of mercury, or other minerals and metals, wherewith in all probability these mountains abound, is no easy matter to determine. For on the one hand, in some mountainous countries, where the snow lies as long as it doth here, and consequently their waters are little else than snow dissolved, we shall find very few infected with this disease: and on the other hand, as few in *Hungary*, *Transylvania*, and other countries abounding with mercury and other minerals. We must therefore suspend,
till

till some ingenious physician of these countries, by long and diligent observing what causes or occasions these tumours, and likewise what prevents and cures them, instructs us better.

We also observed in these countries more idiots and delirious persons than any where else; which we imputed sometimes to the snow-water, sometimes to the inordinate eating of cabbage, of which in all the market-towns we saw monstrous heaps lying to be sold. But upon further consideration I think with *Palmarius*, it ought rather to be attributed to the mineral steams that infect their waters, especially mercurial. For we see the vapour of quick-silver doth principally affect the brain and nervous parts, begetting pallies and *deliriums* in painters, gilders, miners and those that are much conversant about it.

28. We travelled on by the river *Mure's* side to *Knittlefield*, a walled town three miles from *St. Michael*, and then proceeding along the same valley, we passed by some noblemens houses and castles, and lodged at a village upon the *Mure*, called *St. Georgio*, four miles from *Knittlefield*.

29. We travelled on in the same valley by the river *Mure*, till we came to *Newmarkt*, a little walled place, four miles from *St. Georgio*. Then we followed the course of another little river, which runs into the *Dravus* about *Voelckmark*, in a narrow valley between high hills, and a mile from *Newmarkt* we came to a considerable walled town called *Freisach*, in which are four cloisters. A mile further we came to *Heirt*, in *Carinthia*, where we lay this night.

30. We rode rocky ways thro' vallies to *St. Veit*, or *Vit*, a walled town of some note, three miles distant from *Heirt*. The Emperor hath a mint-house for coining money here. Proceeding on three miles further we arrived at *Vilkircken*, which had been a market-town of note, but about three years since a lamentable fire burnt it down to the ground.

Octob. 1. We rode very rugged way among the mountains and rocks, passing the whole length of a lake called *Oostfukerssee*, and at the further end of it observed a strong castle seated on a high hill, belonging to the earl of

Dietrich-

Dietrichstein, a Prince of the empire, who coins money, *Dietrichstein*. Then we came down into a pleasant valley, and so over the river *Dravus*, which is here navigable, and runs by the walls of *Villach*, a well built town, and one of the chief of this country, three miles distant from *Villach*. A good distance from *Villach* we passed the *Guile*, a considerable river falling into the *Dravus*; and had very rocky way among high mountains till we came to *Orlesteina*, a village where we lodged.

We travelled among high mountains very bad way 2. to a village called *Klein Tarvis*, two miles, and proceeding on still among the mountains, we came to the river *Timent*, which runs into the *Adriatic* sea; and lodged this night at *Pontieba*, the last town we passed in the Emperor's country, part of it is subject to the Emperor, called *Pontieba Imperiale*, and part to the *Venetians*, called *Pontieba Veneta*, where we took a bill of health for *Venice*. Between *Klein Tarvis* and *Pontieba*, we saw a herd of goats following the goat-herd like so many dogs: in other places we have seen sheep in that manner following their shepherd, which, no doubt, was usual in *Judæa*; for our Saviour, *John* 10. 4. comparing himself to a shepherd, and his disciples and servants to sheep, saith, *And he goeth before his sheep, and they follow him, for they knew his voice; but a stranger they will not follow, for they know not the voice of a stranger.* Which would have seemed strange to the hearers, had the shepherds been wont only to drive their sheep, as with us they do.

We pass'd over the river *Timent* by a bridge that parts *Carinthia* from *Friuli*. About a German mile off we came to a little fort in a village called *Clausen*, where are two draw-bridges, which we were not permitted to pass, till we had delivered our bill of health. Hence we travelled along by the river, and observed timber-trees floated down the stream, and when the rocks stopped them, men with hooks put them off, and directed them into the force of the current. This is the manner all over the *Alps*, and other high mountains, they fell trees, and get them to any little current of water and expect a good shot of rain, and then float them down to the greater rivers. This day we passed *Vensonga*, a pretty little

Hospita- little walled town, and lodged at *Hospitaletto*, a large
letto. village, where we got quit of the mountains, and came
into the plain country of *Friuli*.

4. We passed by *Limonia*, a walled town situate on the
Limonia. rising of a hill at the foot of the mountains. Some miles
St. Daniele further we passed *St. Daniele*; then we forded the river
Timent in several places. The river hereabouts in a
time of rain, or when the snow melts on the moun-
tains, spreads itself to a very great breadth, as appears
by the empty channel. Soon after we had passed the
river, we ascended a cliff, and enter'd the walls of a
Spilimberg little town called *Spilimberg*, where were rows or cloisters
on each side the street under the houses, which we after
found in many of the towns of *Lombardy*; ten *Italian*
miles further riding brought us to *St. Avogio*, a village
where we rested this night.

5. We rode along the plains, and at ten miles end came
Saribe. to *Saribe*, a walled town, where the river *Livenza* divides
itself and encompasseth the wall. From hence we drove
Conegliano on about two *Dutch* miles, and lodged at *Conegliano*, a
walled town seated on the ridge of a hill; a place of
good account, as is also *Saribe*.

All the way we travelled in *Italy* hitherto, we had
little other bread than what was made of *Sorghum*, a
grain, the blade whereof arifes to seven or eight foot
height, and is as great as one's finger, bearing a large
panicle on the top, the berry or seed being bigger than
that of wheat, and of a dusky colour.

6. We rode a *Dutch* mile, and then ferried over the river
Anaxus, or *Piave*, and at ten *Italian* miles further came
Trevifo. to *Trevifo*, a large town, the head of a province called
Marca Trevisana, an important place for strength, but
too near, and too obnoxious to *Venice* to be rich. From
Trevifo we rode thro' a very fertile and well cultivated
country to *Mestre*, a little town by the *Lagune* (so
they call the flats about *Venice*, which are all covered with
water when the tide is in) where we took boat for
Venice.

Upon the mountains we passed over this voyage, we
found a great number of plants we had not before met
with, as *Quinquesfolium album majus caulescens* C. B. *Quin-*
quesfolium album majus alterum C. B. *Teucrium Alpinum*

Cisti

Cisti flore; *Epimedium vulgare*; *Linaria purpurea parva* J. B. And not far from Pontieba on Italy side, upon the rocks, *Ledum Alpinum hirsutum* C. B. *Ledum Alpinum hirsutum minus*, An *Cistus Austriacus myrtifolius*? *Auricula urfi*; *Sedum serratum* alterum *foliis longis angustis*; *Sedum Alpinum minimum*, *foliis cinereis*, *flore candido* J. B. *Siler montanum* and many others. *Helleborus niger verus* plentifully all over the highest mountains. *Scabiosa argentea angustifolia*, in the channels of the torrents in Friuli: and *Galega*, by the rivers and ditches every where in Italy. In *Marca Trevisana*, some part of *Friuli*, and the greatest part of *Lombardy*, we observed the corn-fields to be so thick set with rows of trees, that if a man from an hill or high tower should look down upon the country at a distance, he would take it to be a wood. Against every tree is planted a vine, which runs up the tree, and the branches of the neighbouring vines they draw from tree to tree and tie together: so that their corn-fields are also woods and vineyards, the same land sufficing for all these productions, and not being exhausted with so much spending (as one would be apt to imagine) by reason of the depth and richness of its soil. Neither in this hot country doth the corn receive any prejudice from the shade or dropping of the trees (which in our colder climate would quite marr it) but rather advantage, there falling little rain in summer time, and the trees keeping off the scorching sun-beams, which else might dry up and wither it; the heat notwithstanding sufficing to bring the grain to perfect maturity. Whereas with us, all the sun we can give it is little enough, and the very grass which grows under the trees is sower and crude: for that usually we have too little heat for our moisture, and they too much. This part of *Italy* hath been deservedly celebrated for fertility, and may justly, in my opinion, be stiled the garden of *Europe*.

OF V E N I C E.

Venice is built upon certain little islands in the middle of the sea, or rather in the middle of certain flats or shallows cover'd all over with water at full sea, but about the city, when the tide is out, in many places bare, called by the *Italians*, *Lagune*. These *Lagune* are inclosed and separated from the main gulph, or *Adriatic* sea by a bank of earth (*il Lido* or *Lido* they call it) extending, according to *Contarini*, about 60 miles, according to *Leander Albertus*, and others (who come nearer the truth) but 35, and resemble the space contained in a bent bow, the bow being the shore of the firm land, and the *Lido* the string. The city stands at an equal distance from the firm land of *Italy*, and from the *Lido*, viz. five miles from each. This *Lido* serves as a good fence or rampart to secure the city and other included islands against the raging waves of the sea in stormy weather. It is discontinued by seven, say some, say others by five breaks or apertures, and those not very wide ones, which they call ports or havens, and by which the *Lagune* communicate with the gulph. Of these inlets, two only are deep enough to admit any vessels of considerable burthen or bulk, viz. those of *Malamocco* or *Lio*. Into, or not far from the *Lagune*, most of the great rivers of *Italy* empty themselves, viz. *Padus*, now called *Po*, *Athesis*, now *Adige*, *Meduacus* major, now *Brenta*, *Meduacus* minor, now *Bacchilione*, *Tiliaventum*, now *Taiamento*, *Liquentia*, now *Livenza*, *Silis*, now *Sile*, *Anassus*, now *Piave*; which, especially in time of floods, bring down with them from the mountains a great deal of earth and salt, which will, it's probable in process of time fill up the *Lagune*, and make

make dry land of them. For I believe, at the first building of *Venice*, no part of them lay bare at low water as now there doth. *Gianotti* saith, that antiently the city was ten miles distant from the firm land, the *Lagune* extending as far as *Orlago*, which, as some think, was so called *quasi Ora lacus*; and that all that space between *Orlago* and *Fusina* (where they now embark that go from *Padua* to *Venice*) had been added to the firm land, notwithstanding all the endeavours the *Venetians* could use.

This city was first founded, according to the best authors, about the time that *Attila* with his *Hunnes* invaded *Italy*, burning and destroying all before him; by some families who, seeing no end of these irruptions of barbarous nations, sought refuge for themselves in these desolate islands, in the year 456, or thereabouts. Others make the first beginning of it to have been before that time in the year 421. or 423. But tho' in the times of former irruptions, many of the neighbouring people fled hither to shelter themselves from the present storm, yet I believe they did not think of settling themselves here, or making these islands their fix'd habitation, and uniting themselves into one city, till the expedition of *Attila*. Whenever it began, it hath continued a virgin-city (having never been ravish'd nor attempted by any enemy) since its first foundation for at least 1200 years, which is more than any other city of that antiquity, so far as I have read or heard, can boast of. Yet is it not at present, nor ever was it fortified, or so much as wall'd about; neither indeed doth it need it, being sufficiently strong by its situation alone, which is such, that it is not likely for the future ever to be taken, unless the sea quite leave it, and the *Lagune* become dry land conjoin'd with the continent. For by sea great ships can come no nearer than the haven of *Matamocco*, and those apertures in the *Lido*, where boats and lesser vessels may enter, are defended by strong forts and castles: besides that, every tide the channel doth so vary, that, without the guidance of an expert pilot, they will not be able to find the way in, but be in danger of being stranded upon the flats.

This

OBSERVATIONS *Topographical,*

This city is in circuit, taking in the *Giudecca*, eight Italian miles. Viewing it from *St. Mark's* tower, we judg'd it to be about the bigness *Amsterdam* was then of. It is divided into two parts by the *Grand Canale*, which passes through the middle of it in the form of the letter S. It is also divided into six parts or regions, called thence *Sestieri*; three on one side the *Canale*, viz. *Castello*, *St. Marco*, and *Canareio*; and three on the other side, viz. *San Paolo*, *Santa Croce*, and *Dorso duro*. It contains 70 parishes, though some make them 72; 67 monasteries, whereof 33 of friars, and 34 of nuns, according to a survey taken in the year 1581, since which time, I believe, the number hath been increased. According to the same survey there were then in the city, of

Noble	Men	1843	Artisans, Men	32887
	Women	1659	Women	31617
	Boys	1420	Boys	22765
	Girls	1230	Girls	18227
Citizens,	Men	2117	Beggars, Men	75
	Women	1936	Women	112
	Boys	1708	Monks	945
	Girls	1418	Nuns	2508
Servants		3732	Priests	516
Maids		5753	Poor of the Hospital	1290
			Jews	1043

The sum total is 134871. *Sanfovinus* reckons the number of souls in his time to have been 180000, but, I suppose, he takes in *Muran* and the other islands, which in this survey are left out. I am not ignorant that several late writers make the present number of inhabitants to be at least 300000, but I believe they speak at random, and by conjecture, upon no good grounds; (as I have been often told, that there are in *Paris* a million and half of people, whereas it is well if there be half a million) there being no reason to think that the city is much increased since *Sanfovinus's* time. I find the sum total of the number of males to exceed the total of the number of females in this survey by above 3500, which comes near to the account of the excess of males in *England*, given

given us by Capt. Graunt, in his Observations upon the weekly bills of mortality in *London*. And I doubt not but if exact observations were made in other places, there would be found the like proportion between the number of males and females born into the world in hot countries, as in cold; so that from this topick, the *Asiatics* have no greater plea for multiplicity of wives, than the *Europeans*. Little channels of water cross and divide the city into many islets, and may rather be called the streets of it, than those narrow lanes and alleys (*Calle* they call them) thro' which you pass on foot from one place to another. By these channels you may convey yourself and goods from any one place in the city to any other, by boat; which is the only way of carriage, except mens shoulders, there being neither coach nor litter, cart nor wain, horse nor ass used, or so much as to be seen here. For passage on foot, there are built about 450 bridges cross the channels, most of them of stone, and of one arch, among which, the most famous is that over the *Canal grande*, called *Ponte di Rialto*: and for passage by water, there are a great number of *Gondalo's* and other boats; some say eight, some ten, some twelve, nay, some fifteen thousand, but I believe all is conjecture; and they were never numbered.

The buildings are generally tall and fair: the palaces of noblemen thick set all over the city, but especially upon the *Canal grande*, which, tho' not vast, are handsome and well built. The foundations of the houses are great piles, or masts, driven into the ground, as at *Amsterdam*.

The arsenal is said to be three miles in circuit, they that speak modestly allow it but two; well stored with arms, ammunition, and all provisions for war. Here the gallies are made and laid up, of which the republick hath (they say) at least 200. Here also lies the famous vessel called the *Bucentoro*, in which, upon *Ascension-day*, yearly, the *Duke*, accompanied with the senators, and attended by some thousands of *Gondalo's* bravely set out and adorned, goes forth as it were in solemn procession some two or three miles to sea, and casting therein a ring, saith, *I espouse thee in token of perpetual dominion*. Here are said to be kept 20000 pieces of ordnance

ordnance great and small, and arms for above 250000 men. A great number [1550] of artificers, as shipwrights, carpenters, smiths, founders, &c. are constantly kept to work at the publick charge.

Of the other publick places and buildings of the city, as the piazza of *St. Mark*, the church of *St. Mark*, with the treasury; the tower of *St. Mark*; the palace of the Duke; the chamber of the great council; the private armory; the theatres for acting the *opera*, with the contrivances for moving the scenes, the *Ponte di Rialto*; the schools or halls for the fraternities; the mint-house, pillars, statues, and other ornaments of this city, I shall forbear to say any thing, but refer the reader to *Sansovinus*, *Lassels*, and others, who have minutely described those things.

Venice, according to the old epithet *Venetia la ricca*, hath been esteemed the richest city, not of *Italy* only, but of all *Europe*: and doubtless was so before the passage to the *East-Indies*, by the *Cape of Good-Hope*, was discovered: when, besides a large share of *Lombardy*, the best country of *Italy*, *Friuli*, *Istria* and *Dalmatia*, the islands of *Cyprus* and *Candia*, *Zant*, *Cephalonia* and *Corfu*, with others in the *Archipelago* subject to them, they were chief, if not sole masters of the *East-India* trade, furnishing the greatest part of *Europe* with the commodities coming from thence, which were then brought by merchants to *Alexandria* in *Egypt*, and there by them brought up. So that then it was a proverb in *Italy*, *Il bianco e'l negro han fatto ricca la Venetia*. White and black, i. e. cotton and pepper have made *Venice* rich. Since the loss of that trade, and by the vast expences of long wars with the *Turks*, wherein they came off losers at last, having parted with first *Cyprus*, and lately *Candia* to them, their treasures, I believe, are well exhausted. Yet the riches of private persons must needs be great, the city having never been sack'd, nor having ever undergone any such change of government as that one considerable party of the people hath been oppress'd, and their goods confiscate. And tho' the publick is not so rich as it hath been, yet will it soon recover itself and grow wealthy again, upon the enjoyment of peace and free commerce. Tho' the wings of this commonwealth have been a little clipp'd, yet hath it enough still remaining under its dominion

to denominate it a potent state, viz. In *Italy* (1.) The *Dogado*, of which the city of *Venice* itself is the head. (2.) The city and territory of *Padua* called *Padoano*. (3.) Of *Vicenza* called *Vicentino*. (4.) Of *Verona* called *Veronese*. (5.) Of *Brescia* called *Bresciano*. (6.) Of *Bergamo* called *Bergamasco*. (7.) Of *Crema* called *Crema*. (8.) *Marca Trevisana*, under which are comprehended *Feltrino* and *Bellunese* the territories of the cities *Feltre* and *Belluno*. [*Leander Albertus* reckons the territories of *Verona*, *Vicenza*, and *Padua* in *Marca Trevisana*; and of *Brescia*, *Bergamo*, and *Crema* in *Lombardy*.] (9.) *Friuli*. (10.) *Istria*. (11.) The territory of *Rouigo* called *Il Polesine de Rouigo*, formerly belonging to the dukedom of *Ferrara*, the whole in length being extended 250 miles, and above half so much in breadth. Out of *Italy* they have a good part of *Dalmatia*, the islands of *Zant*, *Cephalonia* and *Corfu*, besides others of less account.

The ordinary annual revenues of this republick, according to our information, amount to about five millions and three hundred and twenty thousand *Venetian* ducates yearly. A ducat is somewhat less than a *French* crown. Of which

<i>Venice</i> itself yields	1400000
<i>Brescia</i>	1000000
<i>Padua</i>	140000
<i>Vicenza</i>	200000
<i>Verona</i>	230000
<i>Bergamo</i>	140000
<i>Crema</i>	100000
<i>Il Polesine</i>	70000
<i>Istria</i>	150000
<i>Il Friuli</i>	100000
<i>La Marca Trevisana</i>	190000
<i>Gli stati di mare</i>	450000
<i>La Zecca</i>	150000

This city is well served with all provisions of victuals, especially fish and wild fowl. Fresh water they have none but what is brought from land; and rain water which they preserve in cisterns, and which serves well enough for the ordinary uses of the house. The air is

very sharp in winter-time by reason of its vicinity to the *Alps*. *Venice* is noted for the best treacle; the best both drinking and looking-glasses, made at *Muran*, a large burgo or town, about three miles in circuit, and divided in the middle by a broad channel, like *Venice*, in an island about a mile distant from the city, so that it may pass for a suburb of it: for paper, for turpentine, for needle-work laces called points; and if that be worth the mentioning, for *courtezans*. Here is also made soap, not inferior for goodness to that of *Castile*.

The gentlemens and citizens wives are kept close, seldom walking abroad unless it be to church, and then with an old woman at their heels to guard them. Most of the gentlemen and citizens of quality put their daughters, so soon as they come to seven or eight years of age, into some cloister of nuns, to be there educated; whence they are not taken out till they be married. The suiter seldom sees his mistress before they go to be married, or if he doth see her, it is only at the grate of the cloister without speaking to her, all things being transacted by the parents on each side, or by the mediation of an old woman.

The government is aristocratical, but among the gentlemen themselves, were there no citizens or subjects, it would be purely democratical. As for the *Doge* or *Duke*, though they call him Prince, yet they do but mock him, for he hath only the title and shew, nothing of the power or authority of a Prince. The form of government as it is exactly and particularly described by *Contarini*, *Gianotti* and *Sansevinus* out of him, because it is much talked of, I shall here briefly set down.

The government then of the commonwealth is chiefly in the great council; the senate or council of *Pregadi*; the college; the council of ten; and the *Signoria*.

Of the GREAT COUNCIL.

The *Great Council* is as it were the *basis* of the commonwealth in which the supreme power resides; and from which as well the senate as all the magistrates derive their authority. It is made up of all the gentlemen of the city who have passed the twenty fifth year of their age; the

the number of which is about 2500 in all. But yet before they can be admitted to give their suffrages in council they must before the † *Auvogadori di Commune*, by the oath of their fathers or mothers, or if they be dead, of their nearest kinsmen, prove that they have attained that age; and by the testimony of two witnesses, that they are the legitimate sons of such gentlemen as they profess or pretend themselves to be. But to satisfy the longing of such young men as desire to taste the sweetness of government sooner, there is a way for some of those who are but twenty years of age complete to get into the council, viz. Before the fourth of December, being St. Barbara's day, all such young men must, in the manner we have already mentioned, before the *Auvogadori* prove themselves to be full twenty years old, and the legitimate sons of gentlemen. Which done the secretary of the *Auvogadori* gives to each a schedule sealed by the three *Auvogadori*, signifying so much. These schedules they carry to the secretary of the *Quarantia criminale*, who writes the names of them who brought the schedules, each in a scroll by itself; and on the fourth of December carries all these scrolls before the Duke and Counsellors, in whose presence they are all put into one urn, and into another are put so many golden balls as are equal to the fifth part of the number of scrolls, if it be less than thirty; if it be more than thirty, there are yet put in but thirty balls, and so many silver ones as with the golden shall be equal to the number of the young men competitors. These being shaken together, the Duke out of the first urn draws a scroll and reads the name; then out of the other he takes a ball, which if it proves to be a golden one, such an one whose name was written

K 3 in

† The *Auvogadori di Commune* are those who bring in all causes to the 40 criminal judges, called the *Quarantia Criminale*, to whom appeals are made in criminal causes from the sentences of inferior judges as well within the city as without. Those then that would appeal must first have recourse to the *Auvogadors*; who are all diligently to examine the cause, and consider whether it ought to be brought in, and if they all agree that it ought not, then he that would appeal hath no remedy, but to expect another set of *Auvogadors*; but if but one of them accepts it, it is enough to bring it in.

in the scroll is understood to be admitted into the council. And so he proceeds, drawing out first a scroll and then a ball, till all the golden balls are drawn out; and so without more a-do those thirty whose lot it is to have the golden balls may go into the council and ballot: the rest must stay till another year and then take their chance, if they are not before come to the age of twenty five. In troublesome times when the common-wealth wants money, they have also conferred this honour upon such as are under twenty five years for assisting the publick with the gift or loan of a certain sum of money.

At one end of the great council chamber (or hall as they call it, though it be an upper room) sits the Duke on a tribunal elevated above the level of the chamber, with three of the counsellors and one of the heads or chiefs of the court called *Quarantia criminale* (*Capi de Quaranta*) sitting on his right hand; and the other three counsellors, and below them the other two chiefs of the *Quarantia* on his left; and on benches on each side the tribunal, which make right angles with the end, sit the great chancellor and secretaries. The fashion of the hall and benches on which the gentlemen sit, and the places of the chief officers and magistrates, I shall omit, as being hardly intelligible to such as have not seen the place, and not very material to be understood.

The council is assembled every *Sunday*, and sometimes oftener, by the tolling of a bell, which begins at noon and ceases not till one of the clock; and elects the magistrates and officers in this manner: First of all the electors or nominators are drawn by lot. After that those that are nominated by such electors are balloted in the council, and those that have above half the suffrages of the gentlemen present are understood to be elected.

Now because there must be at least nine magistrates created at every meeting of the council, therefore it is necessary to make at least nine electors: and because some some magistrates places may have but two competitors and some four, and in some days are created of one sort, in some of another, and in some of both together; when there are only such created as can have but two competitors (which seldom happens) then there need be but two sets or companies of electors made: but when any

any such are to be created as must have four competitors, then there are four sets of electors made, of nine in each set. While the bell tolls, all the gentlemen that can with convenience are to repair to the council, which being once assembled, the doors lock'd up and the keys brought and laid down at the Duke's feet, none can afterwards be admitted to enter, except he be a counsellor, an *Auvogador*, one of the heads or chiefs of the council of ten (called *Capi de Dieci*) or a censor.

N. B. (1.) For the creation of magistrates there is no *Quorum* or determinate number of gentlemen required to be present to make a council; though it seldom happens the council-chamber not to be full. For other business as the establishing new laws, determining any sentence, &c. the *Quorum* is 600, without which number nothing can be done. (2.) Unless there be four of the counsellors present, there can be neither officers created nor any other business agitated in the great council.

The Duke, the chief magistrates and officers, and all the gentlemen being set down in their places; before the tribunal on which the Duke sits, in the plain of the council-chamber, are placed on a row three urns called *Capelli*, upon stands so high above the floor that no man can look into them, and yet for greater security they are also covered, only the two outermost have two holes in their covers to put in the hand to draw out the balls. The middlemost that stands over-against the Duke hath but one hole. In each of the two outermost urns are put about 800 balls made of copper and gilded over with silver (which I shall take leave to call silver balls, as those that are gilded with gold, golden balls, so that the whole number in both amounts to about 1500 or 1600, for so many gentlemen are commonly present at each meeting of the great council. Besides in these urns together with the silver are mingled sixty golden balls, thirty in each urn. In the middlemost urn are put sixty balls, whereof thirty six are golden and twenty four silver. Then the great chancellor (who is always a citizen and no gentleman) goeth to his place appointed for that purpose, and reads what magistrates are to be created that day, which done, he returns to the tribunal, and calling the *Auvogadors*, the *Capi de Dieci*, the censors and the

old and new auditors, he administers to them an oath to observe the laws of the council, in which is contained, that all shall sit, that none shall change his bench at prohibited times; that none shall seek any magistracy by dishonest means, or favour and abet any other in so doing, &c. When they are sworn, they return to their places, and the three junior counsellors arising up, the eldest of them goes and sets him down over-against the middlemost urn, the next before that on the right hand of the Duke, and the youngest over-against that on the left. Then there are lots drawn what bench shall come first up to the *Capello*, (the whole council being divided into five benches of gentlemen) and what end of that bench, and what side of that end (for all the benches are double) in this manner, There are put into an urn ten silver balls, five of them marked with the five first figures or the characters of the numbers 1, 2, 3, 4, 5, and by each number is written such an end and such a side. The other five balls are marked with the same figures, but on each of them is written the contrary end and contrary side. So that if under the figure 1 in the first five be written, the end towards the *Broil* and the side towards *St. George's*; under the figure 1 in the other five is written, the end towards *Castella* and the side next *St. Mark's*. Then they draw out of the urn one of these balls, the figure and inscription whereof shews what bench and what end and side of that bench is to come first up to the *Capello*. Then they look into the urn and take out that ball which is marked with the same figure and the contrary end and side. After the same manner they draw out by lot another ball, and so a third, fourth, and fifth, calling up the benches in order, till all the electors are made. Of the bench that is called first, each one in order comes up to one of the exterior urns, and draws thereout a ball, which if it be silver, he puts it into another urn set on the floor at the foot of that out of which he drew it, and returns to his place, having obtained nothing; but if it be a golden one, he delivers it into the hand of that counsellor who sits by that urn, and goes presently to the middle urn, and thence also draws out a ball; which if it be silver, having presented it to the counsellor who sits before the urn, he returns to his place: but

but if it be gold, he delivers it likewise to the counsellor, and is understood to be one of the electors of the first set; and sits down on the bench on which the said counsellor sits (which stands across the Duke's tribunal) with his face toward the Duke, that none in the hall may by any nod or other sign recommend themselves to him. Then a secretary pronounces his name aloud, that all of his family or near to him by affinity may take notice of it. There he continues sitting till all the other eight of the first set of electors be in like manner by lot created. And if by chance two of one family are drawn in the first set, the second of them is reserved for the second set or company, and he that is first taken for the second set comes in his room into the first. And then for that day none of that family nor any that are of near affinity to him can come any more to the *Capello*, because it is provided by the laws, that in all the four sets of electors which make up 36, there shall be no more than two of the same family; and that those two shall not be in the same set, so that the nine that are of the same set must be of nine several families. To the youngest of the nine of this first set is by one of the secretaries delivered a schedule sealed by the publick seal, wherein are written in order all the magistrates that are to be that day created. Then all the nine take an oath, to chuse those whom they shall judge most fit to serve the common-wealth, and go forth the council-chamber into a private room appointed for them. In like manner are the other three sets of electors made, who being sworn do likewise take their schedules, and withdraw into their respective rooms. When all the four sets of electors are chosen and withdrawn, then any of the gentlemen in the council-chamber may change his bench as he pleases, [*N. B.* When there are only such magistracies to be disposed of as can have but two competitors, there are but two sets of electors made.] When the first set is withdrawn, they sit down, taking place according to their age. Then a secretary appointed for that purpose reads to them the laws and constitutions which they are obliged to observe in the choice of magistrates: after which he puts into an urn nine balls, marked with the nine numeral characters or figures, and each elector according to his age

age draws out one till they be all drawn out. He, that draws the ball marked 1, is understood to have the nomination of the competitor for the first magistrate's place set down in the schedule, and he who draws that marked 2, to have the nomination of the second, and so in order of the rest. When there are eleven magistrates to be made in a day, he, that hath the nomination of the first, nominates also the tenth, and he that hath the second the eleventh. [N. B. One of these electors may nominate himself to any office; they may also change their votes among themselves, as for example, he that hath the nomination of the competitor for the first place may change with him who hath the nomination for the second or third, &c. and so of any other.] He then, who hath by lot obtained the nomination of a competitor for the first magistrate, names one whom he pleases, who is balloted among the nine, and if he hath two thirds of the suffrages, he is understood to be elected; if not, he names a second and so a third, till he comes to propound one that gets two thirds. His name that is so approved is by the secretary set down in the schedule under the name of that place to which he is nominated, with the name of him who propounded him, and the set of electors he was of; because if the nominated be to a place wherein he is entrusted with the management of publick monies, he that nominates is surety for him, and is to make good what he defrauds the common-wealth of. Then he that hath the second voice names his man, who is balloted and approved in like manner, &c. The same order of nomination and approbation is observed in the other three sets of electors. Only in the third and fourth sets when there are some of those places to be disposed of which can have but two competitors, it's necessary that some of the electors, to whose lot the nomination to such places falls, nominate not at all; because the competitors to such places are already nominated and approved in the two first sets. Yet is not their being electors altogether useless and insignificant, because they have power to ballot those that are nominated by the other electors. If any difficulty arises among the electors about any person nominated, *v. g.* whether he may be balloted or the like,

like, one of the *Auvogadors* and one of the *Capi de Dieci* go into the room where those electors are and determine it.

The competitors being in this manner chosen, none of the electors returns any more into the council-chamber, unless he be one of the counsellors, or one of the *Capi di Dieci*, or of the *Auvogadors*, or of the censors. The secretaries then of the several companies of electors present to the great chancellor the schedules in which are written the magistrates to be elected, and under every one the competitors for it. Now it may happen that one and the same gentleman may be chosen competitor for a magistracy by two or three, or all four of the sets of electors, and then, though he hath no competitor, he may be balloted, because he is understood to be competitor to himself. But if for one place there be chosen in each of the sets a competitor, then they look first whether he be not incapable of such a place, either by reason he hath had some magistracy lately, and the time not yet expired that is required by the law before he be capable of another, or because some of his kindred is in an incompatible place, or because he is indebted to the publick or the like. Now if of four competitors three are found incapable, the fourth remaining without a competitor cannot be balloted. But if one be elected in two sets and his two competitors incapable of standing, yet may he be balloted, for the reason before alleged.

The great chancellor, having received the schedules, reads aloud the names of all the magistrates places with their competitors; and then beginning from the first he propounds the competitors for that, and first him that was nominated by the first set, and if he were nominated by any other of the sets, he mentions that also. And when he hath read the names of all the competitors for one place, they all that are nominated, and all of their family and near affinity go out of the council-chamber into a private room, where they stay till they have been all balloted, and the second place propounded with its competitors; and then they return again and ballot. As soon as they are withdrawn, the great chancellor, with a loud voice, puts all in mind, that both
by

by the divine and human law every one is obliged to favour him whom he judges to be best of all and fittest to serve the common-wealth in such place as they shall choose him to. Then he nominates the first competitor, and little boys, appointed for that purpose (having first deliver'd to every gentleman a ball) run about the chamber with balloting-boxes in their hands to gather the suffrages. The balls are made of linnen, that they may make no noise when they fall into the boxes. The boxes are made double, the one painted white, the other green. The white is marked with *Si*, i. e. Yea, into which they that accept put their balls; and the green with *No*, into which they that refuse the party propounded put theirs. The boxes are made in that manner with a hole in the side to thrust in the hand, that no man can see into which box you let fall the ball. These little boys, as they go along gathering the balls, repeat still aloud the name of the person that is then balloted. When they have gather'd up the balls, they carry them to the Duke's tribunal, and put the *Yea's* in a white vessel there standing, and the *No's* in a green. The affirmative or *Yea's* are told over by the counsellors sitting on the right hand of the Duke, and the negative or *No's* by them sitting on the left; and if the *Si's* are less than half the whole number of suffrages, such a person hath lost it; but if they be more, he may obtain it; and therefore the number by which it exceeds the half is set down. In the mean time the other competitors are named and balloted in like manner; and at last he whose affirmative suffrages, or *Si's*, exceed the half by the greater number, is understood to be chosen to that place. The like method of proceeding is observ'd in the choice of the second, third, and all the rest of the magistrates for that day. When the balloting and counting is done, the great chancellor gives notice who are elected, commanding them to present themselves before the censors, who take an oath of them that they have not done any thing contrary to the laws to obtain those places; which done, the council is dismiss'd. *N.B.* If none of the competitors for any place have above half the number of suffrages, there is none as yet understood to be chosen to that place.

place. And because, by an antient law, the great council is to break up before sun-set, if it happens any of the competitors are not before that time come to the ballot, the names of such magistrates and officers as are chosen are read, and they that remain to be balloted lose the benefit of their nomination, because the next council day all is begun anew, and there are other competitors made. It is permitted to any stranger to be present at the meetings of the great council (as we were several times) to see the manner of proceeding there, and there is a particular bench appointed for them to sit on.

Of the P R E G A D I.

In the council of the *Pregadi* are debated and determin'd all the great and weighty affairs of the commonwealth. This council, in former times, consisted of no more than 60. Afterwards they began to add thereto sometimes 25, sometimes 20, insomuch that it was at last concluded, that there should be made an addition to it (*Aggiunta* they call it) of as many more. The cause of such additions was, I suppose, the greatness and importance of the affairs then to be consider'd and treated of that, so great a number of gentlemen being present at such consultations and debates, matters might be better disputed, and more thoroughly scann'd and examin'd. In the number of the 60 *Pregadi*, there can be but three of one and the same family; and if there be three in the *Pregadi*, there can be but two in the *Giunta*; if there be but two in the *Pregadi*, there may then be three in the *Giunta*. Besides the 120 we have mention'd, this council takes in also many other councils and magistrates, whereof some have suffrages and some have not, only to add reputation to them, they are permitted to be present, to hear the debates, and understand the affairs of the commonwealth. Those which enter into this council with power of balloting are, the Duke; the six counsellors; the council of ten; the *auvogadors*; all the procurators of St. Mark, which in *Sansevinus's* time were 24; the forty judges in criminal causes; the three counsellors that sit with them, called the *Consigli-*

eri da Basso; the two censors, who, after they have finish'd their magistracy, have power to enter into the council and ballot; the three that are over the acts of the *Sopracastaldi*, who, after they have ended their office, have power for a time limited to enter into the council and ballot; the three *Signori alle biave*, that is, those who are to take care of bread-corn and of mills, to make provision thereof for the city, if need require, &c. the four *Signori al sale*, who take care of the making of salt, and farm out the excise of it; the three *Camerlinghi di commune*, who receive and disburse all the publick revenue, we might *English* them treasurers; the three *Signori alle Ragioni vecchie*, who are to disburse what is necessary for the entertainment of foreign princes and ambassadors coming to the city, and what else is appointed them by the common-wealth; the three *alle Ragioni nuove*, who are to exact what is due to the common-wealth of those who have farmed the publick custom and excise, and to punish them that are slack and run behind-hand; the three *Proveditori di commune*, who take care that ships be made of just bigness, and not freighted beyond their measure, oversee the high-ways and bridges, as also all the arts of the city, and the small schools or fraternities, for the *Capi de Dieci* are set over the great ones; the three that are over the arsenal; the three *Proveditori sopra le Camere*, who take account of the general collectors of the revenues of all the cities subject to the common-wealth; the three proveditors *a Dieci Officii*, who exact and gather up such monies of the publick customs or excise as are not fully and absolutely list'd and examined by the custom-officers, the three *Cataueri*, who have also to do with part of the publick revenue, as escheats to the commonwealth, in case a man dies intestate and without heirs; mulct's of such as are cast in a suit: they judge also concerning treasures found either at sea or land.

Those that enter into the council, and have no suffrages, are the *college*, or company of the *Savi*; the proveditors *sopra le Acque*, who are to take care of the *Lagune*, and scouring the channels, &c. The *Dieci Savii*, who see that tithes be duly set out and paid, give possession, register bargains and sales, &c. The three officers of health,

health, who take care that the city be kept clean, and nothing noisome or offensive left in the streets, nothing that is corrupted, or that may cause sickness and infection bought and sold either by land or water; from these, mountebanks and physicians take licences, and they keep account of the number of whores who are licensed, and in time of any epidemical disease, they have absolute power of life and death. The three over the *Dazio*, or publick customs and excise; the proveditors over the of *Alexandria*; the twelve over that of *Damascus*, and the twelve over that of *London*.

The *Pregadi* were so called, as some think, because antiently they were assembled by publick ministers, and by them, as it were, prayed and intreated that they would come and consult of the affairs of the commonwealth. The *pregadi*, properly so called, are chosen by the great council, as the other magistrates are, in the manner before related. They begin so soon to choose them, that all of them may be elected by the beginning of *October*, at which time they enter upon their office. The *Giunta*, or other 60, are chosen both by the council of the old *pregadi*, and the great council in this manner. Upon *Michaelmas-day* the council of the old *pregadi* is assembled, wherein each one of those that have suffrages nominates the person whom he would have to be of the *giunta*. All the nominated are written down. The next day the great council is convened, and the names of all the persons nominated by the *pregadi*, having been first read, are put into an urn, and thence one by one drawn out by one of the secretaries, and balloted by the council; and he that obtains above half of the suffrages, is reckoned to be one of the *giunta*. The other magistrates comprehended in this council, it matters not at what time they be created; because, when the *pregadi* enter upon their administration, those, who at present exercise such offices, are numbered among them as members of the council; and if their offices determine before the *pregadi*'s, their successors enter in their places. Besides, those who assist the commonwealth in a time of need with their estates, lending such a sum of money as the law determines, have liberty granted them to be present in this council, and to understand

derstand the management of publick affairs (yet without power of ballotting) till such time as their monies be repaid, and sometimes longer. For the law prescribes them such a time to enjoy this honour, tho' their money be repaid them before. By this constitution, the commonwealth reaps a double benefit. First, it seldom wants money upon any exigent, many being willing to lend, that they may enjoy this privilege. Secondly, it trains up young men to the knowledge of state-affairs, and qualifies and enables them to manage publick business, when they shall be thereto called.

The *pregadi* are assembled as often as it pleases the college. A council is also granted to the magistrates when they would confirm any law, and to the *avvogadors*, when they have any difficult case to bring in to be determined. The time of their meeting is signified by the tolling of a bell; it is also a custom to send to give notice and invite them by publick serjeants or ministers. They cannot enter into any consultation about publick business, unless there be present four of the counsellors, and 60 at least of such as have suffrages. In this council are consultations had, and resolutions taken about peace and war, truces and agreements, and ways of providing money for the necessities and uses of the commonwealth. How these affairs are treated of, will appear when we shall come to speak of the college. Laws are also confirmed in this council, which are first considered by those magistrates, who are over that business to which such laws appertain. Such magistrates come first to the college, and there shew either the necessity or the benefit and utility of such laws as they would introduce; and if the college approves of them, then they are permitted to bring them into the council of *pregadi*; and if they pass there, then are they valid, and published by publick *bando* or proclamation; after which every one is obliged to take notice of them and observe them: and the magistrate that introduced them, is to see that they be put in execution. They use also sometimes to get their laws confirmed, not only in the council of *pregadi*, but also in the great council. The which thing (saith my Author)

is I suppose principally in the power of him who brings in the law to do, and is usually done to gain more reputation, and add strength to the law. Besides, in the council of *pregadi* is chosen a captain of the *Armata*, in case the commonwealth hath occasion to make war by sea; and a proveditor of the camp when they make war by land: those three kinds of magistrates, which they call, *i. e. Savi grandi, Savi di Terra ferma, & Savi di mare*: which elections are made after this manner. Each one of the *pregadi* nominates one whom he pleases. All that are so nominated are ballotted, and he that obtains more than half the number of suffrages is understood to be chosen to that office or dignity. But because it may often happen that he who is judged fittest for such an office may be known to be unwilling to accept it, and no man, for fear of displeasing him, may dare publicly to nominate him; therefore to avoid that inconvenience, each of the *pregadi* writes down in a paper the name of him whom he would chuse to such a place; which scrolls are all together put into an urn, and drawn out by the great chancellor one by one; and the names written therein being openly read, they are put to the ballot, and on him who hath more than half the suffrages is such office or dignity conferred. But when there is a captain of the *Armata* to be made, he that is in this manner chosen in the council of *pregadi* must be afterwards ballotted in the *great council*, and have competitors given him by the four sets of electors in manner before related, and he who hath most suffrages above the half is understood to be elected. The counsellors also, and the censors, are elected partly by the council of *pregadi*, and partly by the *great council*.

Of the COLLEGE.

The college is the third member of the commonwealth, and of great reputation. It is made up principally of three sets, or kinds of magistrates. First, those they call *Savi grande*. 2. Those they call *Savi di terra ferma*. And 3. those they call *Savi di mare*.

L

The

The number of the *Savi grandi* is six; of each of the other, five; in all sixteen. And besides these of the *signoria*, that is, the Duke, the six counsellors, and the three heads or chiefs of the forty criminal judges, called *Capi di Quaranta*. The *Savi* of the sea, who are otherwise called *Savi à gli ordini*, take care of all maritime affairs, as well such as concern peace and war, as other matters. The *savi* of the land manage and govern land affairs, such as appertain to peace and war, and their especial charge is to keep account of all soldiers that are in the commonwealth's pay. The *Savi grandi* oversee and take care of both, as well at home as abroad. And their particular charge is to make provision both for peace and war, to write to and answer Princes letters, and finally to counsel and govern the whole commonwealth. It is to be noted, that anciently the *Savi grandi* did include the authority and administration of the *savi* of the land, whence the *Savi grandi* might intermeddle with the affairs belonging to the land, tho' not excluding the *savi* of the land. In the same manner the *savi* of the land included those of the sea, but were not included by them, and therefore, with the *savi* of the sea, could take into their consideration sea-affairs. So that the *Savi grandi* included both the *savi* of the land and the *savi* of the sea; the *savi* of the land only those of the sea. But in our times, and not many years since, the way of managing such affairs is a little altered. For that by law it is determined, that the authority and administration of the *savi* of the land shall be equal to that of the grand *savi*; only that of the *savi* of the sea remains in the same terms it was. In old time there were no other than the grand *savi*; afterward the naval power and command at sea being increased, it was found necessary to create a council for sea-affairs, or *Savi di mare*. The like happened afterward when the republick began to grow great on the land, the senate being constrained to create *Savi di terra ferma*, which was presently after that *Trevise* came under their dominion. Anciently, the *Savi di mare* were of greater reputation than those of the *terra ferma*, but after that the dominion of the commonwealth began to increase upon the land, they bent their counsels and endeavours that

that way, and so the *Savi di mare* lost their reputation, and those of the *terra ferma* gained it. These three kinds of magistrates are chosen by the council of *pregadi*, in the same manner as the proveditor of the camp. None can be made *Savio grande*, unless he be of mature age, and reputed of the greatest abilities. The *savi* of the land are always men of reputation for prudence, but not so great as the *Savi grandi*: the *savi* of the sea are still of less esteem than they. And at present this magistracy serves rather to give young-men occasion to exercise themselves in state-business, than for any other purpose, because in matters of moment the *Savi grandi*, and *Savi di terra ferma*, are always employed. Each of these companies of magistrates chuse one of themselves *Præpositus*, or provost, who is chief of that magistracy for one week; he propounds matters in the college, and records those things which are to be executed, which appertain to his magistracy. The manner of proceeding and transacting publick affairs in the college is this: every morning, two hours after sun-rising, the college is convened. [N. B. Whenever we speak of the college, we understand the three societies of magistrates before-mentioned, together with the Duke, the counsellors, and the three *Capi de quaranta*, that is, with the *signoria*, who have their places not only in this college, but also in the grand council, the council of *pregadi*, and the council of ten: so that nothing is debated without their presence and intervention.] The college being assembled, all those letters are read that were received since their last meeting: audience is given to publick orators and ambassadors, if any require it; and each of the three societies of *savi* dispatch such business as appertains to them, and was propounded and recorded by their provost. If therefore there be any business to be debated, appertaining to the grand *savi*, the *savi* of the land and of the sea may be excluded: but if it be not of very great importance, they do not use to prohibit them to be present at such deliberations, but their part is only to hear and hold their peace: or if they do deliver their opinions, yet are they not noted down to be brought into the council of *pregadi*, but only the opinions of the grand *savi*, the counsellors, the *Capi*

de Quaranta, and the Duke. And to the end that the whole method and order of this administration may be the better understood by an example, let us suppose there is a consultation to be had about some affairs appertaining to the *savi* of the sea, they cannot exclude the *savi* of the land, and the grand *savi*, if they please to interpose and meddle with that affair. After consultation had thereupon, not only the *savi* of the sea, but they of the land, and the grand *savi*, the Duke also and the counsellors, and *Capi di Quaranta*, may deliver their opinions if they please, and according as they are of one or more different opinions, make one or several parties [by parties we mean nothing but propositions or sentences.] For that each *savio* and counsellor, much more the Duke, when they do not agree to the opinions of others, may each bring in a party (that is, propound his sentence or judgment about a business) alone. All these parties are noted by a secretary, each one with the name of that *savio*, or other person that was the author of it. And because no matter belonging to the publick administration can be determined without the approbation and consent of the council of *pregadi*; therefore that council being assembled, the aforesaid magistrates come with their parties or propositions noted, and propound them in order. If the parties be more than one (as suppose four) they are all propounded together, but that is first read, the author whereof is the more honourable magistrate, and therefore those of the Duke and counsellors ought to precede the rest, those of the *Savi grandi*, them of the *savi* of the land; and theirs those of the *Savi di mare*. And if any of the three societies of *savi*, in matters appertaining to their charge, have taken several parties, that party ought first to be propounded, of which he is author, who in that society is most honourable. The parties being propounded, if any of the *savi* will speak against them, he ought to precede the rest of the *pregadi*, and among them first that *savio* who is of greatest authority. After that any of the *pregadi* hath liberty to do the same. After sufficient debate upon all the parties, they are all balloted together in this manner. Suppose the parties to be four, then

then there are four secretaries come in, having each a white box in his hand: after them another secretary follows with a green box, and after him still another with a red box.

The first of the four goes from person to person, repeating the name of him that was author of the party first propounded: the second, third, and fourth in like manner repeating the names of the second, third, and fourth, and each one of the *Pregadi* puts his ballot into what box he pleases. So that if he approves not the first party, he puts his ballot in his box that gathers the suffrages for that party, that pleases him. If he approves none of the four, then he puts his ballot in the green box: but if the matter be not yet clear to him, and he be not fully satisfied about it, he puts his ballot into the red box that comes last, and is called the box of the *Non sinceri*, i. e. such as neither approve or reject. The suffrages being thus gathered, the ballots of each party are told over, and that which exceeds the half by most suffrages is understood to be confirmed and ratified; but if none come up to the half, then that which hath the least number of suffrages being laid aside, the other three are balloted after the same manner, with three boxes, and after them a green and a red one. If none of the three get half the number of suffrages, then that which hath fewest being again laid aside, the remaining two are balloted in like manner; and if neither of these passeth the half, then that which hath the most suffrages is balloted alone: and if the suffrages for that exceed not the half, none of the parties balloted is understood to be confirmed: in which case new parties must be brought in, if the matter treated of be necessary, which may be done the same day, because the Duke, any one of the counsellors, *Capi di Quaranta*, or *Savi* may bring in new parties. Such a business may also be referred to another day. But it seldom happens that of so many parties no one is approved. When none of them is confirmed, and the matter requires further debate, we shall declare what order is taken when we come to treat of the council of ten. But it is to be noted, that the first time all the parties are balloted together, it may happen that there are more than half the suffrages in the box of the *Non sinceri*,

sinceri, i. e. such as suspend, being not clear in the point; and in such case none of the parties can be balloted, but the matter requiring new debate, new parties are to be brought in. And because it may happen that some one of the council of *Pregadi* may have upon some matter under consideration a proposition to make, which may be for the benefit and advantage of the commonwealth, which came not into the minds of the *Savi* or others who have power of propounding their judgments or opinions in council, that such advantage be not lost, it is ordained that such opinion or sentiment be communicated to one of those who have power to propound, and by him propounded to the council. But that none but the *Savi* and others before-mentioned should have liberty to bring in parties, is ordained to avoid prolixity and confusion; it being also unlikely that what comes not into the thoughts and consideration of the college, in which are the wisest persons of the city, should be imagined or found out by other men. But granting this might sometimes happen, yet it would be so seldom, that no great account ought to be made of it; and so much the rather, because in every constitution the lesser convenience ought to give place to the greater. To every of these three societies of *Savi*, the same time of six months determines their office: but yet are not all the persons in each chosen at the same time. For the grand *Savi* are chosen at two several times, three at once; and from the choice of the first to the choice of the second intercedes three months time. The *Savi* of the land and the *Savi* of the sea are also chosen at two times, three the first time, and two the second, with the same interval between. To the grand *Savi* there is sometimes, great affairs requiring it, added an *Aggiunta* of three more, and these we call *Savi straordinarii*. One may be chosen into the council of *Pregadi* successively two or more years one after another.

Of the D U K E.

Of the antiquity of this magistrate, and what great power and authority he had in ancient times, and how afterwards it came to be moderated and diminished, I shall

shall say nothing, only shew in what manner he is elected, and what authority he hath in our times. So soon as the former *Duke* is dead, the six counsellors enter into the palace with the three *Capi de Quaranta*, of whom we shall speak hereafter. The senior counsellor is understood to be vice-duke, and therefore he performs some business which belongs to the office of the Duke, as the sealing of ballottines for them that are to undertake any new office, &c. The letters which the *Signoria* writes to magistrates and commanders abroad go in the name of the *Governatori*. The counsellors once enter'd the palace go not thence till the new Duke be created. The palace-gates are also kept lock'd up, and only the wickets left open to enter in and go out at: and besides there is a guard; more for ancient usage than any necessity, for that there is no more alteration in the city upon the death of the Duke, than upon the death of any private gentleman, that is, none at all. * It's true indeed the magistrates do not proceed in the administration of their offices, before there be a new Duke created; but that is, because it's supposed they are all busied about the election. The body of the deceased Duke, being adorned with the ducal vestment, is brought down, and placed in a low room called the *Sala de Pioueghi*, where it remains three days; and there are twenty gentlemen appointed, who being clothed with scarlet accompany it when it is carried down, and sit round about it till night, returning again the next morning, and this they continue to do for three days. Then is the funeral celebrated with all the pomp and magnificence which the dignity of such a magistrate requires. The next day after the funeral the great council is convened, and given to understand by the great chancellor, that being to give beginning to the election of a new Duke, they are first to make choice of five correctors and three inquisitors. The vice-duke then standing up makes a speech to the council, and having commended the life, behaviour, and government of the Duke deceased, exhorts and stirs up every one to

* *Nic. Crassus* saith, that it is now by law ordained, that besides the *Auvozadors* some other magistrates shall also sit and administer justice. *Annot.* 27 in *Gianot.*

make choice of a person to succeed him, that may be useful and honourable to the commonwealth. Then doth he cause the laws to be read, which prescribe the manner and order of electing the new Duke: and last of all the council proceed to elect the said five correctors and three inquisitors after the same manner they use in the choice of other magistrates.

The office of the inquisitors is diligently to examine the life and actions of the deceased Prince; and if they find that he hath in any thing erred or done amiss, they are obliged to accuse him; and look what punishment he hath deserved is inflicted on his heirs: but such punishments are never corporal, but only pecuniary mulcts. And such a cause, by reason it is a business of great importance, is not finally determin'd by the inquisitors, but agitated in the great council, and may also be examin'd in the *Quarantia criminale*. These inquisitors have a year's time to finish their inquisition in.

The office of the correctors is to see and consider well if any new law to be observed by the succeeding Prince is needful to be introduced; and if there have been any error discover'd in the administration of the precedent Duke that ought to be corrected. For the doing of which, so soon as they are created, they are brought into a certain chamber, where they meet so often till they be agreed upon what to them seems needful to be amended, or fit to be newly introduced; and this commonly takes up three or four days. When they have finish'd their considerations, they therewith acquaint the *Signoria*, who cause the great council to be convened, in the accustom'd place and manner; whither the said correctors come, and there cause all such laws and corrections as they judge fit to be made, to be publickly recited; which being balloted one by one in the great council, are either confirmed or rejected. This done, the great council the day following is again called, to which meeting none can come but such as have passed the thirtieth year of their age. The doors being shut at the appointed time, all that are present in council are number'd over, and, in an urn, or *Capello* of that sort which have but one hole in their cover, are put 30 golden balls, marked with a certain
note,

note, and as many silver ones as together with the golden are equal to the number of the gentlemen present. After this the junior counsellor goes out into St. *Mark's* church, which is just by, and, having made his reverence to the altar, takes a little boy which he finds there, and brings him along with him into the council, who is to draw the ballots out of the urn for the gentlemen when they come up to the *Capello*, they not being permitted to draw them out themselves, to avoid fraud. This boy is called the *Ballatino*, and is he that in procession goes before the *Duke*, who is bound, so soon as the boy comes to be of convenient age, to make him one of the secretaries. The *Ballotine* being brought in before the *Signoria*, one counsellor, and one *Capo de Quaranta*, chosen by lot, go and set themselves down before the *Capello*. Then they draw lots which bench is to come up first. [N. B. Because there is but one *Capello*, the benches do not come up by two and two, as in the creation of magistrates, but one by one; and therefore there are put in ten lots into the urn, and drawn out as before, and the benches come up accordingly.] If one of those five benches on the side towards St. *George's* be drawn, they are to begin to come up at that end that is toward the *Broil*; and if one of those five that are toward St. *Mark's* be drawn, they are to begin to come up at the end toward *Castello*. The lots being drawn, that gentleman that sits first, at that end of the bench which is to begin, arises and goes up to the *Capello*. Then the *Ballotine*, in his name, draws out a ball, which, if it be a silver one, he puts it in another *Capello* standing at the foot of that out of which he drew it, and he for whom it was drawn goes presently out of the council-chamber. But if it be gilded and mark'd, he delivers it to the counsellor sitting by, and the great chancellor pronounces aloud the name of him for whom it was drawn; who presently, between two secretaries, is carried into a room out of the council-chamber. Then all those who are of his family, his uncles, cousins, father-in-law, and they that are of near affinity to him are called, and, being come up to the tribunal, number'd by one of the secretaries, and so many silver balls taken out of the *Capello* as are equal to the sum
of

of them, and so they depart the council-chamber. In the same order all the rest of the benches are called by lot, till all the golden balls are drawn out of the *Capello*. And after those who have obtain'd them are withdrawn into the foremention'd room, the council is dismiss'd; and the go come all before the *Signoria*, and sit down on two benches there standing, half on the one, and half on the other. Then in a certain *Capello* there placed are put 21 silver balls, and 9 golden; and these thirty persons, being called according to the order they were chosen in, come up one by one to the *Capello*, and the *Ballotine* draws out a ballot for each one, till all the golden balls are drawn. Those then for whom the silver balls were drawn depart, and those nine who obtain'd the golden withdraw into the foremention'd room; where, when they are all come together, they are by the *Signoria* conducted into another room, where are set ready all necessary accommodations for them; and having given oath to make a good election, they continue there lock'd up together till they have chosen forty of forty different families: in which election they thus proceed. So soon as they are shut up, they draw lots among themselves who shall nominate first, who second, who third, &c. and accordingly in that order nominate. Those nominated are balloted among the nine, and if they have seven suffrages they are understood to be of the forty. The election being finish'd, they signify so much to the *Signoria*: the which the same day, or, if it be too late, the day following, cause the great council to be called; which when it is assembled, the great chancellor with two secretaries goes to the nine for the schedule in which the forty electors are written; and returning therewith into the council, by the command of the *Signoria*, reads over the names of them that are chosen; who, one by one, coming before the tribunal, are sent out of the council into a certain chamber; and if any one of the forty happens not to be present in council, one of the counsellors, and one *Capo de Quaranta* go to search him out, and, without giving him leave to speak to any body, bring him into the council-chamber, and afterwards into the room where his companions are withdrawn. When the forty are

all

all met together, the council is dismiss'd, and then, after the manner of the former thirty, these forty come before the *Signoria*, and being set upon the two benches in the middle, they are likewise by lot called up to the *Capello*, wherein are put 28 silver balls, and 12 golden. Those for whom the silver balls are drawn depart the hall; and those for whom the golden are brought by the *Signoria* either into the chamber where the former nine were, or into another as they please; where, having taken oath to make a good election, they are lock'd up, and by way of suffrage choose 25 of 25 several families, in the same manner as the nine chose the 40, to which election nine suffrages of the twelve are necessary.

The election being made, they acquaint the *Signoria* therewith; which, if the time permits, causes the great council to be assembled the same day; if not, the day following; and after the same manner the great chancellor reads the names of the 25; and those that are chosen, when they hear their names read, come up to the tribunal, and are sent out of the council into a room by themselves, as were the forty: and if any one be not present, he is searched out, and brought in likewise.

When all the 25 are met, the council is broken up, and the 25 come before the *Signoria*, and sitting down are called by lot, and come up to the *Capello*, into which are put 16 silver balls, and nine golden. Those for whom the *Ballotine* draws the silver balls depart; those that get the golden remain, and being lock'd up together, they do, in the same manner as the former 12, by 7 suffrages chuse 45 of 45 several families, who afterwards being called by the *Signoria* into the great council, the present and absent being all come together, as we said before, the council is dismissed. And the 45 being set before the *Signoria* in form aforesaid, and called by lot, come up to the *Capello*; into which are put 34 silver balls, and 11 golden. Those for whom the silver balls are drawn go at their pleasure, those for whom the golden remain; and having given oath to make a good election, they are shut up as the former, and by way of suffrage chuse 41 of so many several families, of whom each must have 9 ballots, and these are the electors of the *Duke*. After these 41 are thus elected,

elected, and in the great council pronounced, and also
 all met in the room appointed, in manner aforesaid;
 first of all the mass of the Holy Ghost is celebrated, then
 every one of the electors promises by solemn oath to lay
 aside all human passions, and to chuse for *Duke* him
 whom to chuse in his conscience he shall judge to be
 most for the interest and honour of the common-wealth,
 as like to do it most credit and best service; and that
 with the profoundest silence he will keep secret whatever
 is done or said among them. After this they are lock'd
 up together alone, without any other ministers or se-
 cretaries, so close that no person can be admitted to see
 them: and first of all among themselves of the anci-
 entest they chuse three heads or chiefs which they call
Priors; and also of the youngest among them they chuse
 two who perform the office of secretaries. The priors sit
 down, having before them a table, upon which are pla-
 ced two balloting boxes of that sort that are used in the
 great council; in one of which are put 40 balls, mark-
 ed with a certain mark, that no deceit may be used.
 The rest of the 41 sit also down, each where he pleases.
 The two secretaries make 41 schedules, and having folded
 them up give to each person one, they take also the ballots
 and distribute them to all. Then they are called one
 by one before the three priors, and each one writes in
 his schedule the name of him whom he would have to
 be *Duke*, and leaves it upon the table. The two secre-
 taries note the names of them that are written in the
 schedules, and by how many each one is named. [The
 names in all the schedules seldom pass 6 or 8, because
 there are never more who can be judged fit to be pro-
 moted to such a dignity.] After which all the names
 so noted are put into an urn, and thence by lot drawn
 out. And he that is first drawn, if he be one of the
 electors is presently sent out into the chamber of the
Quarantia, and there shut up; and liberty is then given
 to any one of the electors to speak any thing he hath to
 object against him, why he is not fit for so great a place.
 And if any thing be by any one objected, it is set down
 by the secretaries: and he being called in, all that hath
 been spoken against him is read to him, and if he will
 stand upon his defence he may make his answer; which
 when

when he hath done he returns into the same chamber again. The same order is used till there be none left who will object any thing against him, or till he will defend himself no longer; after which he is presently balloted, and as soon as that is done all the electors go up before the priors, the eldest of which with a little staff numbers over those that are in the affirmative box, and also those that are in the negative; and if the affirmative amount to 25, the person balloted is understood to be chosen Duke; and there can be no other balloted. This order hath been since changed, and notwithstanding the first, or any other have come to 15 suffrages, yet have the rest been balloted; and he that hath obtained most suffrages hath been made Duke. But if the affirmative suffrages do not amount to 25, there is taken by lot another out of the urn, in which the names set down each with the number of its nominators were put, and the same order of proceeding observed till they come to one who gets 25 ballots. It may happen that none comes up to that number, in which case the electors continue shut up, and name and ballot the nominated so often, till one comes to get the foresaid number of suffrages. The Duke being on this wise created, many ceremonies are wont to be performed. First of all the 41 by the great chancellor send word to the *Signoria* who it is that is created Duke, who first of all go to congratulate him, and give him joy; and, if it be in the day time, cause all the bells to be rung. Then his kindred and friends come to visit him, and at the same time there is money coined with his name upon it. After which the 41 electors with the Duke go into St. *Mark's* church, and having done reverence to God, all mount up a scaffold, and the ancientest of them tells the people (who by this time have filled the church) that they have chosen a Duke in the room of the deceased; and commending the election, shews him to the people, who in token of confirmation and joy give him loud acclamations. The Duke then speaks to the people, and encourages them to hope well of his government; which done, they go down the scaffold, and bring the Duke before the altar; where
by

by the procurators of the church, an oath is tender'd him to observe the laws, and a standard put into his hand by the vicar of the *Primicerius* of St. *Mark's*. After this, having made an offering at the altar, he comes to the door of the choir, where he is placed upon a little low moveable scaffold (*Pergoletta* they call it) accompanied by one that carries the standard, and by another of his near friends or relations, who carries a cup full of gold and silver money stamped with his name; and by the mariners of the arsenal he is drawn out of St. *Mark's*, and carried round about the *Piazza*, he that carries the cup scattering money among the people as he goes along. When he hath rounded the *Piazza*, he enters in by the principal gate into the palace; where being arrived at the foot of the stairs he goes off the *Pergoletta* to go up. In the midst of the stairs he finds the counsellors and *Capi de Quaranta* who there wait for him. When he is got up to the top of the stairs, the eldest counsellor puts upon his head the du-

* To put him in mind of his mortality, because that is the place where the corps of the deceased Duke lie in state. cal cap; and thence he is led into the * *Sala de Pioveghi*, and after he hath sitten a while there in a seat appointed for that purpose, he is conducted by them to his lodgings, and the palace being resign'd to him, they all go to their own homes. His habit much differing from the common renders him venerable. On his head he wears a ducal cap, called *il Corno*, because it hath an *Apex* or horn arising above the top of it on the hinder part, and under that a white coif, with little strings, which from the ears hang down backward upon his neck. On his back a loose vest or mantle without sleeves so long that it draws upon the ground, of velvet, damask, scarlet, or any other rich cloth. When he goes abroad the bells of St. *Mark's* are rung: there are certain banners carried before him, and trumpets of an extraordinary greatness sounded: then follows the cushion or pillow, and the seat of gold, and after that the Duke himself under an *Umbrella*, between two of the principal foreign ambassadors or agents then in town, and the others behind him. After him follow about 30 couple of the chief gentlemen, all in cloth of scarlet; and he, that hath the right hand in the first couple, carries a sword upright in his hand,

The COUNSELLORS.

The Duke cannot determine, nor so much as execute any the least business alone without the presence of the counsellors, who are in number six, one for each *Sestiero*. They are always chosen of the most honourable gentlemen of the city, the greatness and dignity of their office requiring it. They are not all six chosen at the same time, but by three and three; those for the three *Sestieri* on one side the great channel at one time, and those for the *Sestieri* on the other side at another. They are chosen by the great council, and are of the number of those magistrates that require four competitors: but the council of *Pregadi* for each of these makes one competitor, who is afterward balloted in the great council. So then when there is an election to be made of three counsellors, the great council is assembled, and after that the four sets of electors are made, and withdrawn into their several rooms, to make their elections after the order before set down, one of the secretaries gives notice to all who have votes in the council of *Pregadi*, that they withdraw into the chamber adjoining to the great council-chamber, where the council of *Pregadi* uses to meet. Where when they are all met, the Duke with the counsellors and *Capi de Quaranta* goes in to them; and it being by lot determined for what *Sestiero* a counsellor shall be first chosen, every one names him whom he would have to be counsellor. All the persons nominated are written down, and afterwards balloted; and he that hath more than half the number of suffrages is chosen competitor: and this manner of chusing in the council of *Pregadi* is called *Scrutinio*. The council of *Pregadi* and the Duke being returned into the great council, and the competitors made, they are all balloted after the manner forementioned, and he that hath most above half the number of suffrages is understood to be chosen counsellor. It may happen that in the great council one only may come to be nominated competitor, and sometimes the same that is chosen by the *pregadi*, in which case he ought to be balloted; notwithstanding that by the law none can be balloted without a competitor: because, being nominated in

in divers councils, he is understood to be competitor with himself, as hath been before intimated; and if he hath more than half the suffrages, he is chosen. [N. B. Where there are more competitors than one balloted for any place for which the *pregadi* chuse a competitor, it happens, for the most part, that he is chosen who was made competitor by the *pregadi*, because of the dignity and reputation of that council.] The six counsellors sit with the Duke, and with him administer all affairs, and dispatch especially all private business: as for example, give audience, read publick letters, grant privileges, and the like; which things cannot be done by the Duke, if there be not four counsellors present; and yet the counsellors may dispatch any the like business, though the Duke be not with them. They have power of propounding in the great council, the council of *pregadi*, and council of ten; which the *Savi*, who have power of propounding matters in the council of *pregadi*, and the *Capi di Dieci*, who have privilege of propounding in the council of ten, have not; so that the authority of the counsellors is greater than that of the *Savi*, or *Capi di Dieci*. [N. B. That any one counsellor, tho' no other concur with him, may propound in the council of *pregadi*, but not in the council of ten, unless three more concur with him in the same opinion.] This magistracy continues for a whole year, but is exercised but eight months; the other four months being spent in the *Quarantia criminale*, wherein three counsellors continually sit; who, during that time, are called *Consiglieri de basso*, i. e. lower counsellors. They may sit in this court either the first four months, or the last four, or the two first and two last. And therefore it is necessary that there be always nine counsellors, six who sit constantly with the Duke, and the three now mentioned: and when these are to go sit with the Duke, or go out of their office, three of those which sit with the Duke come down to sit in the *Quarantia*, or finish their office, and there are three new ones created. Moreover it is to be understood, that with the Duke and six counsellors do also sit three of the *Quarantia criminale*, i. e. the forty judges in criminal causes, whom they call
Capi

Capi de Quaranta, who hold this dignity two months: so that by the *Signoria* is understood the *Duke*, the six counsellors, and the three *Capi di Quaranta*. Anciently the *Duke*, with his counsellors, was wont to be present at the judgments of the *Quarantia*; but *Marcus Cornarus*, who was made *Duke* in the year 1365. by reason of the multitude of business which daily increased in the common-wealth, left that care to those counsellors we have been speaking of. The three *Capi de Quaranta* sit with the *Duke* and counsellors, that as the *Quarantia* participates with the *Signory*, having three counsellors joined with them; so the *Signory* may partake of the *Quarantia*, the three *Capi de Quaranta* sitting with them. And so the *Signory* comes to intermeddle with the business of the *Quarantia*, and the *Quarantia* with the affairs of the *Signory*. And now to acquaint the reader with all the *Duke's* management. First, he with the counsellors intervenes in, and is part of the college, the council of *pregadi*, and the great council, as we have already signified. He is also present in the council of ten, and hath power of propounding in all these councils; so that no affairs can be treated of without his presence, tho' alone he cannot dispatch any business. Publick letters are written in his name, as also all privileges and publick writings, as tho' he were the author of them. All letters that come from foreign princes and ambassadors, and agents sent abroad by the common-wealth, are directed to him. When the *savi* of the land or sea, or other magistrates write letters to their proveditors, they subscribe them with the *Duke's* name thus, *Dominicus Contarenus Dux Venetiarum*. And this mode is observed in all other sorts of publick writings, as patents, privileges, obligations, laws, &c. The council of ten varies this form, and subscribes in two manners, for either the whole council writes, and then they subscribe *Dominicus Contarenus Dux Venetiarum, &c. cum nostro Concilio Decem*; and those that answer superscribe accordingly. Or only the heads or chiefs of the council of ten, called *Capi di Dieci*, write; and then the subscription is, *Dominicus Contarenus Dux Venetiarum, &c. cum Capitibus Concilii Decem*. And those that return answer super-

scribe accordingly. Every eighth day, that is, on *Wednesday* weekly, the Duke is wont to go down and visit the courts of justice, making a tour round the two *corridores*, where the magistrates sit, stopping a while at each court, and stirring up and encouraging the judge or magistrate that presides there to administer justice impartially. And if there be any one that thinks he hath not right done him, he recommends himself to the *Duke*, acquainting him with his cause; and if the Duke judges that he is injured by false judgment, he presently commands that magistrate or judge to do him right; but if the contrary appears to him, he reproves him that thought himself aggrieved, and goes on in his visitation. Some Dukes have changed this order, not visiting always on the same day, that they might come upon the magistrates unexpected. Multitude of business sometimes constrains the Duke to intermit this usage for a week or two. All the money of the commonwealth is also stamped with the Duke's name, but not with his face or image. That he may be the better enabled (saith my Author) to maintain his port, and live with that magnificence such a place requires, he hath an allowance from the publick of 3500 ducats *per an.* a sorry revenue for one who hath the shew and title of Prince, being less than so many *French* crowns. And yet he is obliged to keep a family that may be honourable and suitable to such a dignity; and moreover to make four feasts yearly at four several times, *viz.* upon St. *Stephen's* day, St. *Mark's* day, *Ascension* day, and St. *Vit's* day: to which feasts it is the custom to invite all the gentlemen according to their ages. To the first, besides the counsellors, the *Capi de Quaranta*, the *Auogadors*, and the *Capi de Dieci*, are invited those that are of greatest age and gravity: to the second, those that are younger; and so to the third and fourth, still those that are younger and younger: besides which feasts, he is bound also to send to every gentleman that comes to the great council a present, which was formerly five wild ducks; but now a-days there is a sort of money coined for that purpose; upon one side thereof is the figure of St. *Mark*, reaching out a standard to the Duke,

on

on the other side the name of the Duke, and the year current of his dukeship, on this manner, *Dominici Contareni Venetiarum Principis munus*, Anno IV.

The Council of T E N.

The council of ten, tho' it be a member of great importance, yet is it rather accessory or adjunctive, than principal, and seems to me much to resemble the *dictator*, that was wont to be created by the *Romans* in times of great and imminent danger; only differs in that the common-wealth is never without this magistracy. The authority thereof is equal to that of the council of *pregadi*, and the whole city; and therefore it may meddle with, and transact any state-affairs as it pleases, without appeal, or being accountable to any superior power. Tho' this power be not used by it, except only in cases of greatest importance, and which cannot otherwise be remedied or provided for: as for example, to consider about making war, concluding a peace, or other negotiation secretly, to send a proveditor into the camp speedily: which things, if they should be first treated of in the college, and afterwards debated in the council of *pregadi*, they could not be managed and transacted with that secrecy, expedition, and other circumstances, as the time and conjuncture of affairs requires. When the college then intends to manage any business secretly, as suppose to conclude an agreement with any Prince or state, to attempt any thing on their enemies, or begin any new enterprize or design, which ought to be kept secret till the time of execution, then they cause letters to be written to such agents, or other persons as are to be employed in that business, with this inscription, *Dominicus Contarenius Dux Venetiarum, &c. cum Concilio nostro Decem*: and they superscribe their answers in like manner: and their letters are received by the *Capi di Dieci*, who bring them to the college; at which time the three *Capi di Quarantia*, and the *Savi di mare*, are excluded: and then they treat of the business, and debate it as long as is needful; yet not they alone, for the *Capi di Dieci* call the rest of the council of ten. Be-

sides at such consultations are present not only the Duke, the counsellors, and all the council of ten, but the grand *Savi*, and the *savi* of the land, the *giunta* which consists of fifteen, the *Auvogadors* and nine of the procurators.

* But all these have not power of giving suffrages, but only those ten of the council of X, the *giunta*, the Duke, and the six counsellors. The aggregate of all these, united with the council of X, is called the council of X with the *giunta*, which is not convened but on weighty occasions, to debate and manage great affairs, and such as appertain to the state of the whole city; which affairs might be treated of, and dispatched by the council of *pregadi*, but for the respects aforesaid are undertaken by this council. The council of X was erected, some say, after the death of *Vitale Michaeli*, to punish such as had plotted treason against the common-wealth. Others say it had its beginning in the time of *Pietro Gradenigo*. At first its authority was but small, but by little and little its reputation increased. It punishes, besides such as practice treason, or conspire against the common-wealth, those that coin counterfeit monies, those that commit sins against nature, as sodomy and bestiality. It also disposes of certain monies which are assigned to it by the chamberlains and other officers: it hath the command of certain galleys in the arsenal, marked with these two letters, C and X, signifying that such vessels are in the power of the *Capi di Dieci*. It also takes care of the artillery. When any of these things are to be considered of, then only those ten that are of the council of X, with the Duke and counsellors, are assembled; and this is called absolutely and simply, the council of X. The ten of this council are chosen in the great council, like the other magistrates, for one year; out of which are taken by lot every month three, who are called the heads, or chiefs of the ten [*Capi di Dieci*] and of these, one presides every week, which is

* *N. Crassus* saith, That at present there are none of any sort added to the council of X, but this council consists only of the Duke, the six counsellors, and the *Decemviri*; and that this council doth not now meddle at all with peace and war, and the publick treasury, but only punish enormous offences, and especially rebellion and treason.

he,

he, who in the great council-chamber takes place over-against the Duke. The office of these is to convoke the council of X, and propound their opinions therein; yet not singly, but all three together, or at least two; and they are obliged to call the council every eight days, and oftener if occasion require. Anciently there was no determinate time for assembling this council, but because every time it was convened, the whole city was moved and troubled, as judging that it was not without some great reason; therefore to avoid and prevent such disturbance and disquiet of mens minds, there was a time determined for its meeting. When they are to pass sentence upon any offender that is in their hands for the forementioned crimes, he cannot, either by himself or any other person, plead his cause or defend himself, but appears before the council and is examined, and there are notes taken of all he saith. And when the *Capi di Dieci* bring in such a cause into the council, either one of them must undertake his defence and plead for him, or else he cannot be defended at all. From the sentence of this council there is no appeal, neither can it be reversed or changed but by themselves or successors, if the matter be such as is capable of change. Those of this council, so soon as they go out of their office, may presently enter upon another. For all these places, the grand *Savi*, the *savi* of the land, and *savi* of the sea, the counsellors, the ten of this council, the *Avogadors* and censors give no impediment one to another; but so soon as a gentlemen hath finished one of these offices, he may enter upon another. If it happens that any one, while he is exercising a lesser magistracy, be chosen to a greater, he may, if he pleases, relinquish the less, and take the greater.

The Procurators of St. M A R K.

The office of procurator is of great reputation in this city. Though it be not of the number of those which have to do with the administration and government of the commonwealth: yet is it honourable, because, as that of the Duke, it continues for life; and is besides

ancient, and hath maintained its reputation to the present times. There was never any gentleman of great esteem in the city, but he was adorned with this dignity: so that very few have been Dukes since this magistracy was ordained but they have before been *procurators*. Anciently there was but one procurator made, to take care of the church of *St. Mark* and its treasure; but after the death of *Sebastian Ciani*, he having left a great legacy to *St. Mark's*, the revenues whereof were to be distributed by the procurator; one person not sufficing for so much business, it was found necessary to create another; whose charge it should be to superintend and manage the legacy of *Sebastian Ciani*. Afterwards legacies being multiplied, in the year 1270, in the time of *Rinieri Zeno*, a third was thought fit to be created; and they did so divide the business among them, that one took care of the church, another of the legacies bequeathed by them that dwelt on this side the great channel; and the third of their legacies who dwelt on the other side of the great channel. In the same Duke's time there was a fourth created to be colleague with him that governed the church and its treasures. For the same reason two more were added when *John Soranzo* was Duke. Afterwards in the year 1423, when *Francis Foscaro* was made Duke there were three more created a-new; so that then the whole number was nine; three of whom took care of the church and its treasures; three of the legacies of the three *Seslieri* on one side the great channel; and three of the legacies of the three *Seslieri* on the other side. In the year 1509, when the republic's armies were broken and routed at *Addua* by *Lewis XII. King of France*, they were constrained to creat six for money, conferring that honour upon such as would lend the commonwealth such a certain sum. These procurators have power to compel heirs to perform the wills of the testators. They wear ducal habits, and carry servants about with them; and have the precedence of all other magistrates. In processions the counsellors and three *Capi de Quaranta* take place of them. They have either an habitation assigned them, or sixty ducats *per annum* allowed. They all enter into the council of *pregadi*, but not all into the council of ten, but only nine chosen by the said council, three for
a pro-

a procuracy. They are not capable of any other magistracy, except that of *Savio grande* and the *Giunta* of the council of X. When there is a captain of the *Armata*, or a proveditor of the camp to be chosen, there is a law made in the *pregadi*, that any one that is procurator may obtain that dignity. They cannot go to the great council, but only in the election of the Duke; which license is then granted them by an especial law. They were wont anciently upon all those days the great council met, during all the time the council sat, to continue in the court of the palace, and never to depart thence till the great council was risen; that if any unexpected or sudden accident should happen they might be ready to remedy or assist. And this perchance was the reason that it was forbidden them to go to the great council. But in our time this usage is not observed, because of that quiet and tranquillity the commonwealth enjoys: which is such, that no man thinks there can any accident happen in the city which shall require the presence of the procurators more in one place than in another. There is no magistracy or dignity in the city so much desired by the gentlemen as this of procurator: yet I think that it hath lost much of its ancient reputation. For whereas formerly it was not wont to be granted to any but ancient men, and of great repute; in our times we have seen many adorned therewith, who were neither of mature age, nor great esteem and credit.

Of the other officers and magistrates (whereof this republick hath good store) I shall say nothing, they belonging rather to the administration of justice and particular civil affairs, than the government of the commonwealth. Only it is worth the notice taking, that they have so many offices divided among the gentlemen, to busy and employ the greater number of them, that so, having something to entertain their time with, they may not be at leisure to think upon innovating in the government, or any way design and practice against the constitution of the commonwealth, to the disturbance of the peace.

The gentlemen while they are in the city wear black gowns with narrow sleeves, and caps; without which habit they never appear in the streets, or any publick place.

place. In the *Piazza* of *St. Mark*, that side next the great council-chamber is appropriated to them to walk in, where no others mingle with them. This walk, or rather the company of gentlemen walking together there, they call the broil [*Broglio*.] The principal diversion of the gentlemen, citizens, and strangers is to walk in this *Piazza*.

The present citizens of what quality or estate soever have no share or interest at all in the government of the commonwealth. Probable it is, that when the great council was shut up (as they phrase it) that is, determined to such a number of families excluding all the rest, that all the citizens of any quality were therein comprehended; because before that time the government having been common to all, it is not likely the present establishment would have taken place without commotion and disturbance, if there had been a considerable number of citizens of fashion and interest left out. Formerly this honour hath been given to many citizens of eminent merit. Lately since the wars with the Turks in *Candy* for 100000 ducats any citizen might be created nobleman. By which means the state raised ——— millions of ducats, there having been more than fourscore families advanced to that dignity.

They put not weapons into the citizens hands, but chuse rather to make use of mercenary soldiers in their wars.

There is no law that prohibits any citizen to be chosen to any place or office by the great council, nor doth there need it: for that they are as sure not to be chosen as though there were such a law, the interest of the nobility being as strong a bar to such a choice as a law would be. And yet *Gianotti* saith, that some have attained to be nominated and balloted in the great council.

The air, notwithstanding the situation of the city, is held to be very good and healthful, and (which is more) agreeable to people of all countries and tempers. We never enjoyed our health better, nor had better stomachs to our meat in any place beyond the seas than we had here.

Here we first saw the *Ludicrum*, called by some *Diabolus in carcere*, from a little hollow glass-image made like the

the picture of the devil (tho' a glass bubble would serve the purpose as well, or better) which being put into a cylindrical glass-tube full of water, they could make ascend, descend, or rest in any part of the tube at pleasure. The manner thus, they prepared an *icuncula* or glass-bubble hollow and having in the heavier end of it a little hole of such a poise as just to ascend and swim in water, and having put it into a glass-tube stopp'd close or sealed at one end, and almost full of water, they clap their hand on the mouth of the tube, and press down the air upon the *superficies* of the water. The water, being thus press'd, presses upon the air in the *icuncula*, or bubble; which giving place, part of the water thrusts into it by the little hole. The bubble, thereupon becoming heavier, sinks in the water. Then taking up the hand, and removing the force, the air in the *icuncula*, or bubble, by its elastick power expands itself, and expelling the water again, the *icuncula* or bubble ascends; and so by proportioning the force, they can make it not only ascend and descend from top to bottom, but rest at what point of height or depth they please. Of this and other ludicrous experiments concerning the motion of these bubbles, I shall not think much here to set down what doctor *Cornelius* of *Naples* hath delivered in his *Progymnasmata Physica*, Epist. de *Circumpulsione Platonica*. I was (saith he) informed by *Lud. Casalius* of an experiment invented at *Florence*, viz. Two glass-bubbles being put into a vessel of water were so alternately moved, that in cold water the one sank to the bottom, the other swam on the top; but putting in a little hot water they changed places, that at the bottom ascending up to the top, and that at the top sinking down to the bottom. Being taken with the novelty of the thing, I applied my mind to consider what might be the physical reason of it, and soon found out how it might be effected, to wit, one of these glass-bubbles was perforated with a little hole on the heavier side, and blown so light as to swim in water: then some of the air being suck'd out, there was so much water let in in the room thereof, as to make the bubble sink in cold water, which upon filling the vessel with hot

hot water would mount up to the top. For the air in the bubble being rarefied or dilated by the heat of the water presently expels the water contained in the bubble; and so the bubble becoming lighter ascends. The other glass-bubble is imperforate and made of that poise as to swim in cold water and sink in hot.

He goes on. *Sed cum in ejusmodi ludicris inventis occuparemur, rumor ad aures nostras perfertur, versari in manibus viri cujusdam ingeniosi admirabile artificium, nempe vitreum tubum aquâ plenum, in quâ plures orbiculi vitrei sursum deorsumque ferebantur ad nutum ejus qui tubi ostium digito obturabat. Tum eò cogitationem intendi, ut quâ ratione id fieri posset assequeretur: neque diu hæsitaveram, cum intellexi orbiculos illos esse aliquanto leviores aquâ, & foramina habere, per quâ digiti pressu aqua intruderetur; aere intus contento in minus spatium coactò; ut proinde orbiculi graviores facti fundum peterent: at mox digito laxato dum aer sese iterum ad debitam expansionem redigeret, aquam per foramen extrudi; atque idcirco orbiculos leviores factos iterum sursum adsurgere.*

Quibus animadversis memoria mihi suggessit ea, quæ alias meditatatus eram de impulsu aquæ in cavum orbis infra illam demersi, cujus supra facta est mentio. Quamobrem existimaui posse orbiculos perforatos sursum vel deorsum ferri, & in medio libratos detineri, absque ulla caloris aut frigori vi: Item sine ullo digiti manusve pressu; sed tantum impulsu ipsius aquæ, quæ modò majorem modò minorem altitudinem supra dictos orbiculos assequeretur, hoc scilicet modò.

In tubum vitreum retortum *A B C D* aquæ plenum immittantur orbiculi perforati *B, C, D*, quæ ita aquæ tubo incluse innitent, ut minimi ponderis accessione fundum petant; tum digito comprimente vel spiritu adacto, cogantur dicti orbiculi ad fundum descendere, tubusque ita invertatur, ut illi versus *D* ferantur. Quibus positis observavimus dictos orbiculos per tubulum *B C D* ascendere & descendere pro ratione inclinationis ipsius tubi. Etenim cum recta *AB* horizontali perpendiculariter insistit, globuli ex *D* descendunt versus *B*; at contra cum tubus ita aptatur ut recta *AB* ad horizontem inclinetur, tunc iidem orbiculi ex *B* ascendunt versus *D*.

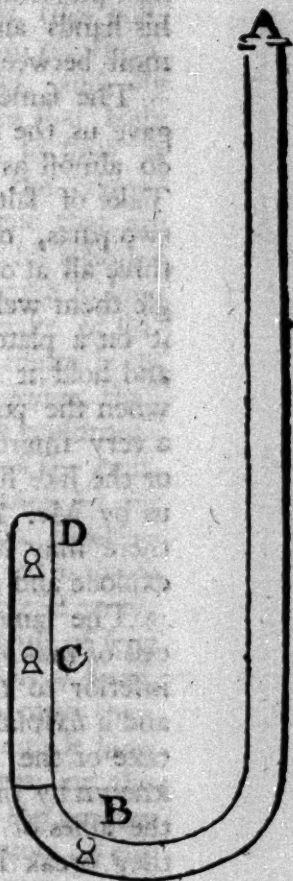
At verò positis globulis, ut ferè semper contingit, aliquo gravitatis excessu sese superantibus, tunc poterimus multiformiter illos movere; namque alter pessum ibit dum reliqui sursum feruntur; item alius quovis in loco quasi libratus pendebit; si scilicet organum tantundem inclinemus, quantum ad opus requiri experientiâ didicerimus.

Ratio cur hæc ita contingant manifesta est ex iis, quæ jam exposuimus de aqua, quæ in orbiculos eò copiosius intruditur, quo fuerit altior, ut accidit cum tubus *AB* ad horizontis planum erectum fuerit, nam ex inclinatione ipsius tubi aquæ altitudo decrescit ac proinde ejus vis seu conatus fit minor.

Strukturam vitrei tubi usus docebit: Id curandum est potissimum, ut ejusdem crura *AB, DB* quodammodo parallela sint; altitudo autem *BA* altitudini *BD* tripla vel quadrupla. Tubus æqualem ubique habeat amplitudinem, vel in crure *BA*, sit aliquanto amplior quàm in crure *BD*.

Orbiculi eâ parte quæ pertusa est præponderent, ut dum in aqua librantur foramina deorsum vergant, &c.

A nobleman of this city shewed us a boy, who had a faculty of charging his belly with wind, and discharging it again backward at pleasure; which we saw him



him perform. When he charged himself he lay upon his hands and knees, and put his head on the ground almost between his legs.

The same nobleman shewed us the experiment, and gave us the receipt of a fulminating powder, which will do almost as well as that chargeable one made of gold. Take of salt of tartar one part, of common brimstone two parts, of nitre or salt-petre three parts; put these three all at once into a mortar, beat them fine and mingle them well together. Take of this powder and put it on a plate of iron, or in a fire-pan or other vessel, and hold it over a flame of fire, or a pan of charcoal; when the powder begins to melt, it will explode with a very smart crack like to *Aurum fulminans*. The same, or the like fulminating powder, hath been since shewn us by Mr. Fisher of Sheffield. It is not unlikely that there may be several sorts of powder made, which shall explode and fulminate after this fashion.

The same gentleman also shew'd us the whole process of making *Venice-Sope*, which is very like and nothing inferior to *Castile-Sope*. It is made of the best oil olive, and a *lixivium* or lee. The *lixivium* is thus made: they take of the ashes of *Kali*, made in *Spain*, and in *England* known by the name of *Beriglia*, two thirds, of *Kelp*, i. e. the ashes of the ordinary sea-wreck one third. These they break into small pieces with a mallet or hammer, and mingle well together. This done, they put them into a mill, such as we grind apples in to make cyder, and grind them to powder, and then sift them. This powder they mingle with a little slaked lime, and make it up into pellets, which they put into latches or troughs, and pouring water upon them make the *lixivium*. The cauldrons wherein they boil their sope are very large. The bottom of them is a copper vessel, but the sides are made up of stone close cemented together, bound about with iron hoops, and inclosed in a case of wood. Into these cauldrons they put a great quantity of oil, it may be one third part of the measure, or more or less as they please: then they fill them up with the *lixivium*, and, putting fire under it, cause it to boil continually; as the *lixivium* boils away, still filling it up with new, till all the oil be consumed or boiled out of it. For the
oil

oil, uniting itself with the salt of the *lixivium*, rises continually up to the top in the form of a scum or froth, which by degrees grows thicker and thicker, and, by reason of the cold of the air, condenses into that body we call sope. This scum continues to rise so long as there is any oil remaining in the vessels; the cremor or coat of sope growing still thicker. Those that are practised can tell by the smell when all the oil is boiled away. The *lixivium* they account strong enough so long as it will bear an egg. This *lixivium* they make of seawater; but they told us they might as well make it of fresh water. To expedite the making the *lixivium*, they take some of the boiling *lixivium* out of the cauldrons; to which purpose there is a pipe comes out of the cauldron in the region of the *lixivium*, whereby they let out the boiling *lixivium* into a trough; and this, together with cold water, they pour upon the ashes to promote the separation of the salt. When the oil is boil'd away, they let all cool, and, taking the cremor or crust of sope off the superficies of the liquor, spread it upon a floor, and smooth it, and so let it dry in a bed of more than a brick's thickness. When it is dried they cut it long ways and cross ways into oblong parallelograms, or the figure of oblong bricks, there being nicks in the borders of the beds on purpose to direct the instruments to cut it. This done, they pare these pieces from any impurities that may adhere to them from the bottom of the bed (for the beds are all strowed with lime-dust to hinder the sticking of the sope to the floor) and run them over a plane, to smooth them. These large pieces they subdivide into lesser, and seal them with a seal.

The reason, why they mix *Kelp* with the *Beriglia*, is, because *Beriglia* alone would make the sope too soft, and *Kelp* alone too brittle.

To colour the sope green they take the juice of beet, a good quantity, and put it into the cauldron with the *lixivium* and oil. The *Germans* will have it thus colour'd; and perhaps the nitre which is in this juice may add some vigour to the sope.

The fire is continually kept burning, and so the liquor boiling till the operation be finish'd.

OF

P A D U A.

PADUA [*Patavium*] watered by the rivers *Brenta* and *Bacchilio*, is an ancient city, supposed to be built by *Antenor* after the taking of *Troy* by the *Greeians*. That *Antenor* came into these parts *Livy* (who was native of this city) witnesseth in the very beginning of his history, in these words, *Jam primum omnium satis constat, Trojâ captâ in cæteros sævitum esse Trojanos, duobus Æneâ Antenorêque, & vetusti jure hospitii, & quia pacis reddendæque Helenæ semper auctores fuerant, omne jus belli Achivos abstinuisse. Casibus deinde variis Antenorem cum multitudine Henetum, qui seditione ex Paphlagonia pulsi & sedes & Ducem, Rege Pylæmene ad Trojam amisso, quærebant, venisse in intimum maris Adriatici sinum, Euganeisque, qui inter mare Alpesque incolebant, pulsus, Henetos Trojanosque eas tenuisse terras.* And that he founded *Padua* *Virgil* saith exprelly, *Æn. i.*

*Antenor potuit mediis elapsus Achivis
Illyricos penetrare sinus, atque intima tutus
Regna Liburnorum & fontem superare Timævi;
Unde per ora novem vasto cum murmure montis
It mare præruptum, & pelago premit arva sonanti.
Hic tamen ille urbem Patavî, sedesque locavit
Teucrorum, & genti nomen dedit, armæque fixit.*

And *Martial* uses this compellation to *Valerius Flaccus* the poet, a *Paduan*, *Antenorei spes & alumne laris*. And yet some there be who will have *Altinum* to be the city of *Antenor*, and *Padua* to have been built by one *Patavius*, a King of the *Veneti*.

It was celebrated of old time for the chastity of its women, according to that of *Martial*, *Uda puella legas sis*
Patavina

Patavina licet. After the decay of the Roman empire it was ruined and destroyed by *Attila*; restored again by *Narfes*; then sack'd and burnt by the *Lombards*; and after various successes, in the time of the Emperor *Otho* I. it obtained its liberty, and was governed as a commonwealth by its own magistrates; till first *Ezzellinus* the tyrant, and not long after him the *Carrarese* made themselves lords of it; from whom the *Venetians* extorted it in the year 1405, though they pretend that the *Paduans* voluntarily delivered themselves up to them. It is inclosed with two walls: the interior (called *Antenor's* wall, though of a far later make) is about three miles in circuit. The exterior of great strength with bastions and other fortifications, and a deep trench before it for the most part filled with water, about 6 miles in compass, built by the *Venetians* when *Leonardo Loredano* was Duke, in the time of the league of *Cambray*, when the Pope, the Emperor, the Kings of *France* and *Spain*, the Dukes of *Mantua* and *Ferrara* joined themselves together against the *Venetians*; as appears by this inscription over the gate of *All-Saints*.

Hanc antiquissimam urbem literarum omnium Asylum, cujus agrum fertilitatis semen natura esse voluit, Antenor condidit: Senatus autem Venetus his belli propugnaculis ornavit, Leonardo Lauredano Duce Venetorum invictissimo, cujus Principatus varias fortunæ vices excipiens quàm gloriôsè superavit.

It was stoutly defended by the *Venetians* against the Emperor *Maximilian* besieging of it with an army of 80000 men, Anno 1610. Though it be large in compass, yet is it neither rich nor populous; the number of the inhabitants, according to the largest reckoning, amounting to no more than 38000 souls, which I believe exceeds the just sum by at least 10000.

The territory of this city is a large plain or level, and the soil very rich and fertile; so that it is come to be a proverb, * *Bononia la grassa, ma Padova la passa, & Venetia la guasta.* Their bread is esteemed as good as it is cheap, according to that other proverb, *Pan Pa-*

* i. e. *Bononia* the fat, but *Padua* surpasses it, and *Venice* wastes it.

doano,

doano, Vin Vicentino, Trippe Trevisane & Putana Venetiana. Bread of *Padua*, wine of *Vicenza*, tripes of *Treviso*, and courtezans of *Venice* are the best in their kinds. No wood is permitted to be planted for the space of one mile from the wall round about; that in case it should be besieged in a time of war, the enemy might find no shelter among the trees; and this is called the waste, and is reserved only for corn. There are very few meadows or pastures near this town, which is the reason that milk is dear here. They make bread for the poor of *Mayz*, or *Indian* wheat (which they call *formentone*) and *Sorgum*, whereof they plant good store hereabout. The most considerable buildings in this city are, 1. The town-hall, 256 feet long, and 86 feet wide, according to *Schottus*; by some thought to be the largest room in *Europe*, but we judged it to be less than *Westminster-Hall*; underneath it are shops, so that you ascend many steps to go into it; it is called *Palazzo della Ragione*, because the courts of justice are held there. 2. The publick schools. 3. The church of *St. Anthony*, called the *Santo*. 4. The church of *St. Justina* with the *Benedictine* cloister. 5. The palace of the *Arena*, or amphitheatre. 6. The castle of the magazines of corn and ammunition. 7. The bridge called *Ponte molino*, where there are about 30 water-mills together, upon the river *Brenta*. 8. The palace called the court of the *Capitaneo*. 9. *Antenor's* tomb, as they would have us believe. The particular descriptions of all which places may be seen in *Schottus* and others. Near the *domo* we observed a fair building called *Mons pietatis*, where there is a great bank or stock of money, some say 40000 crowns, for the use of poor men, who bringing a pawn, and depositing it here, may have money to the value of it, without any interest if it be a small sum; if a considerable sum, then they are to pay for it five *per cent*, which serves to defray the charges of clerks, and other ministers and attendants, &c. and if there be any surplusage, it is divided yearly among the poor, the stock still remaining intire. The like charitable foundations we observed in many other cities of *Italy*, and I could wish there were of them among us in *England*.

This city is most famous for its university, founded by the Emperor *Frederick II.* Anno 1220. for a full history whereof

whereof I refer the reader to *Thomasinus's Gymnasium Patavinum*. I shall only add the *Series Lectionum*, whereby may be seen what professors there were in each faculty at the time of our being there, and what books they were to read.

In Nomine Domini nostri Jesu Christi Amen.

Generale, ac novum principium Interpretationum nobilissimæ, ac florentissimæ Academiæ D. D. Artistarum Patavini Gymnasii, anni præsentis 1663. & 1664. feliciter incipiet die 3 Novembris, sub felicibus auspiciis Illustrissimorum, & Excellentissimorum. DD. *Michaelis Mauroceni* pro Sereniss. Repub. Veneta Prætoris, & *Simeonis Contareni* Præfecti Patavii, necnon Illustriss. ac Generosissimi D. *Joannis Georgii Noesleri* Nob. Norisbergensis Pro-Rectoris, & Syndici dignissimi.

Aggredientur Infrascripti DD. Explicandi Infrascripta.

Ad Theologiam in Via S. Thomæ.

R. P. D. M. Michael Archangelus Rivetta Casalensis Leg. Tertium Lib. Mag. Sententiarum hora tertia matutina.

Ad Theologiam in Via Scoti.

R. P. D. M. Matthæus Ferchius Vegliensis.

Ad Lecturam Sacræ Scripturæ.

R. P. D. Leo Matina Monachus Cassinensis.

Ad Metaphysicam in Via S. Thomæ.

R. P. D. M. Jo. Dominicus Pusterla Mediolanensis Leg. Septimum Metaphysicorum hora secunda matutina.

OBSERVATIONS Topographical,

Ad Metaphysicam in Via Scoti.

R. P. D. M. Antonius Cotonius Nicosiensis.

Ad Theoricam ordinariam Medicinæ.

Exc. D. Antonius Molinettus Venetus in primo loco.

Exc. D. Prosper Todeschius à Castiglione Florentino in secundo loco Leg. Aphorismos Hippocratis hora prima matutina.

Ad Practicam ordinariam Medicinæ.

Exc. D. Raymundus Jo. Fortis Veronensis in primo loco.

Exc. D. Jo. Franciscus Bonardus Patavinus in secundo loco Leg. de Febribus hora prima Pomeridiana.

Ad Philosophiam ordinariam.

Primus locus vacat.

R. & Ex. D. Anastasius Galdiulus Vic. Abb. Cassin. ac Præf. Gener. in 2 loco Leg. Octavum Lib. Physicorum hora secunda Pomeridiana.

Ad Anatomem ordinariam.

Exc. D. Antonius Molinettus Venetus in primo loco.

Exc. D. Petrus de Marchettis Patavinus Eq. D. Marci in secundo loco Administrabant Anatomem die, ac tempore debito hora 3 matutina.

Ad Theoricam extraordinariam Medicinæ.

Exc. D. Hieronymus Sanctatophia Patavinus in primo loco. Exc. D. Ermenegildus Para Forojulienfis ex Portu Buffoletto in 2 loco. Exc. D. Hercules Saxonia Patavinus in tertio loco Leg. Primam Fen Avicennæ in pulsatione Campanæ hora pr. pomerid.

Ad Practicam extraordinariam Medicinæ.

Exc. D. Hieronymus Frigimelica Patavinus Comes in primo loco.

De Pulsibus, & Urinis in Xenodochio diebus vacantibus.

Ex. D. Anglus Montagnana Patavinus in secundo loco.

Exc. D. Hilarius Spinellus Patavinus in tertio loco Leg. de Morbis particularibus à corde infra hora secunda matutina.

Ad Philosophiam extraordinariam.

Exc. D. Petrus Franzanus Vicentinus in primo loco.

R. & Exc. D. Valerianus Bonvicinus Ver. Canonicus Estensis in 2 loco.

R. P. D. M. Adrianus à Sancta Juliana Patavinus in tertio loco Leg. primum, & secundum Libr. Physic. hora prima Vespertina.

Moral, and Physiological.

179

Ad Lecturam Philosophiæ Moralis.

R. P. D. Joseph. Meraviglia Clericus Regularis Mediolanensis Leg. tertium & quartum Ethicor. hora prima Pomeridiana dieb. vac.

Ad Lecturam Meteorum, & Parvorum Naturalium Arist.
Locus vacat.

Ad Lecturam Chirurgiæ ordinariam.

Exc. D. Dominicus de Marchettis Patavinus in primo loco. Exc. D. Franciscus Bosellus Venetus in secundo loco Leg. de Tumoribus præter naturam hora tertia matutina.

Ad Lecturam Simplicium.

Exc. D. Georgius à Turre Patavinus Interpretabitur Lib. VI. Dioscoridis, Ubi de Venenis, & Venenor. Curat. in horto incipiet docere die 2 Maii hora 22.

Idem ad ostensionem Simplicium.

Ad Theoricam extraordinariam diebus vacantibus.

Exc. D. Alexander Borromeus Patavinus Leg. Artemi parvam hora 2. Vespertina diebus vacantibus.

Ad Lecturam Tertii Libri Avicennæ.

Exc. D. Sebastianus Scarabiccus Patavinus in primo loco. Exc. D. Jo. Pompilius Scotus in secundo loco Leg. de Morbis particularib. à capite usque ad cor hora prima mat. dieb. vac.

Ad Logicam.

Primus Locus vacat.

Exc. D. Jacobus Cadenedus Scotus in secundo loco.

Exc. D. Albanus Albanus Patavinus in tertio loco Leg. secundum Posteriorum hora prima matutina.

Ad Mathematicam.

R. P. D. Stephanus de Angelis Venetus Leg. tertium Lib. Euclidis Elementorum.

Ad Humanitatem Græcam & Latinam.

R. & Exc. D. Octavius Ferrarius Mediolanensis Leg. Virgilium, & Theophrasti Characteres.

Landus Moneghina Bidellus Generalis:

In Christo Nomine Amen.

Rotulus Excellentissimorum DD. Legentium in Publico Gymnasio Patavino, ad infrascriptas Lecturas, quas aggre-
d. Die 3 Novembris anni instantis 1663. & 1664. sub felicibus auspiciis Illustri-
ssimorum, & Excellentissimorum DD. *Michaelis Mauroceni* pro Serenissimo Do-
minio Veneto Prætoris, & *Simeonis Contareni* Præfecti Patavii; necnon Illus-
trissimi, & Generosissimi D. Comitis *Pauli Bennassuti* Vicentini, Almæ Universitatis DD. Juristarum Pro-Rectoris, & Syndici Meritissimi.

Ad Lecturam Juris Canonici de mane.

Exc. I. V. D. D. *Jacobus de Sala* Canonicus Pat. & Abbas in primo loco. Exc. I. V. D. D. *Jo. Antonius de Bonis* Canon. Estensis in secundo loco. Exc. I. V. D. D. *Ubertinus Discaltius Patavinus* in tertio loco Explicabunt Librum primum Decretalium incipiendo à titulo de constitutionibus.

Ad Lecturam Juris Canonici de sero.

Exc. I. V. D. D. *Antonius Paulutius* Ven. Abbas, & Can. Pat. in primo loco. Exc. I. V. D. D. *Vincen- tius Franciscus* Canonicus Patavinus in 2 loco. Rev. & Exc. D. *Placidus Frascata* Monachus Cassinensis in tertio loco Exponent Librum quartum Decretal. à tit. primo de Sponsalib. & Matrim.

Ad Lecturam Juris Cæsarei de mane.

Exc. I. V. D. D. *Jo. Michael Pieruccius* Florentinus in primo loco. Exc. I. V. D. D. *Paulus Dottus de Castro Franco* in secundo loco Legent primam ff. Veteris partem.

Ad

Moral, and Physiological.

181

Ad Lecturam Juris Cæsarei de sero.

Mag. & Exc. I. V. D. D. & Co. D. Jacobus Caimus Utinensis in primo loco. Exc. I. V. D. D. Antonius Aloysius Aldrighettus Pat. in paritate primi loci. Exc. I. V. D. D. Jo. Franciscus Savonarola Patavinus in tertio loco Legent primam ff. Novi Partem.

Ad Lecturam Criminalium.

Exc. I. V. D. D. Joannes Galvanus Patavinus Exponet Rub. ff. ad L. Jul. de adult. & subinde alios titulos.

Ad Lecturam Pandectarum.

Exc. I. V. D. D. Achilles Bonfiglius Patavinus Prosequetur explicationem libri primi ff. Veteris, & incipiet à titulo de Adoptionibus.

Ad Lecturam Codicis.

Exc. I. V. D. D. Joannes Capivaccæus Patavinus Incipiet à titulo de pactis, inde ad alios titul. procedet.

Ad Lecturam Institutionum.

Exc. I. V. D. D. Joseph. Marchius Appulus in primo loco. Exc. I. V. D. D. Nicolaus Gagliardus Tridentinus in secundo loco. Exc. I. V. D. D. Ludovicus Justachinus Patavinus in tertio loco Explicabunt materiam ultimæ voluntatis, & incipient à tit. de testamentis ordinandis.

Ad Lecturam Feudorum.

Exc. I. V. D. D. Scipio Gonnemius Cyprius Tractabit hoc anno de feudi origine, nomine, causis, seu forma, & constitutione ad varios feudal. lib. tit.

Ad Lecturam Authenticorum.

Exc. I. V. D. D. Toldus Bellini Constantini Patavinus Explicabit authenticum sive Novellam 39. de Restitutionibus, & eaq. parit in 11. Mense post Mortem Viri, Juncto Authentico 108. de Restitutionibus, & 159. de Restitutione Fidei commiss. &c.

Vacat. *Ad Lecturam de Regulis Juris.*

Ad Lecturam Artis Notariæ.

Exc. I. V. D. D. Aloysius Angeli Patavinus Legatorum tractatum prosequetur.

Stephanus Giachelius Bidell, Gener.

OBSERVATIONS *Topographical,*

The citizens and strangers here dare not stir abroad in the dark, for fear of the scholars and others, who walk up and down the streets most part of the night, armed with pistols and carbines. If any one comes within hearing, they cry *Che va li?* i. e. who goes there? and if they answer, they bid them turn back; which, if they do not suddenly do, they shoot at them. When two parties of these scholars meet, each man standing behind a pillar (for the streets have portico's or cloisters on each side) they shoot one at another. These *Martenalia nocturna*, as some call them, or *Che va li's*, are thought to have had their original from the accidental meeting and quarrelling of some scholars, who went to the same mistresses, or whores. A wonder it is to me, that the *Venetians* will suffer such mis-rule.

Here is a publick physick-garden, well stored with simples, but more noted for its prefects, men eminent for their skill in Botanics, viz. *Aloysius Mundella*, *Aloysius Anguillara*, *Melchior Guilandinus*, *Jacobus Antonius Cortusius*, *Prosper Alpinus*, *Joannes Veslingius*. The epitaph of which last, being so considerable a person, I shall here exhibit to the reader, as I found it on his monument in the church of St. *Anthony*.

Joanni Veslingio Mindano,
Equiti.

*Naturæ verique scrutatori solertissimo, qui sapientiæ
Atque exoticarum stirpium studio Ægypto peragrata,
Ab Veneto Senatu rei herbariæ
Et corporum Sectioni præfectus, eum Latinitatis
Et Græcæ eruditionis cultum mutis artibus circumfudit;
Ut illic naturæ ludentis pompam æmularetur;
Hic spectaculi diritatem oratione deliniret,
Ut quantum oculi paterentur tantum sibi placerent aures:
Ad extremum laboribus fractus,
Dum miseræ plebi gratuitam operam commodat,
Noxio contactu publicæ saluti vitam impendit.
XXX Mensis Aug. An. Chr.. CIO IOC XLIX.
Æt. LI.*

In the dormitory of the cloister of the *Dominican* friars we saw the cell of *Albertus Magnus*, over the door of which were inscribed these monkish verses.

*Quam legis Alberto Domus hæc fuit hospita magno,
Parva quidem, haud parvo sed tamen ampla viro.
Parvus erat subit parva cum limina portæ,
Magnus at exiguo sub lare factus erat.
Senserat hoc dixitque superba Ratisbona magnum
Hospitem in hospitio dispare Padua colis :
Archisacerdotis mitram magnosque penates
Accipe Magne ratis, sic bona navis erit.
Post majora Deus referans palatia, Magno
Dixit, habe magni magna theatra poli.
Audiit & magni propylæa petivit Olympi,
Nam majore capî limine magnus habet,
Deo ter maximo numini :
Alberto ter magno lumini,*

Padua is governed by a *podesta* or mayor, who is chief in civil matters; and a *Capitano* or governor who is over the military; both elected and sent by the *Venetians*.

From *Padua* we made a by-journey to *Albano*, anciently *Abona*, some five miles distant, where we viewed the hot baths. The springs arise in a rocky hillock, consisting of a porous stone, and are so plentiful that one of them drives an overshot mill. The water is so hot, that in one of the sources, the country-people usually scald their hogs to get off the hair. It contains a copious white salt which shoots upon the earth where the water runs. This the common people hereabout gather, and use with their meat, which yet hath not the true taste of common salt, but somewhat approaching to nitre or salt-armoniac. Besides it is so impregnated with stone, (which, by reason of the salt it contains actuated by the heat, it dissolves and imbibes in the stone quarries it passeth through) that it suddenly precipitates it on the bottoms and sides of the channels wherein it runs, which become thereby as it were so many stone troughs; and on the mill-wheel it drives, which it so incrusts with

a stone of a dark gray colour, that every other month they are fain to peck it off. That the waters which petrify † do by running through stone-quarries wash off small *ramenta* or particles, and being in motion support them, and when they stand or settle in any place let them fall again, is more than probable, by what we see in daily experience, the hardest stones being worn and hollowed by a constant dropping of water upon them: much more will water be able to do this, when impregnated with salt, and that salt actuated by heat. The waters of *Albano* are not made use of to drink, but only to bathe in, as at *Aken*, *Baden*, &c. though *Schottus* saith that they usually drink of one of the sources.

Feb. 3.

We travelled to *Vicenza*, a city less in circuit than *Padua*, as being but four miles round, but more populous, containing between thirty and forty thousand souls. It is encompassed with a brick-wall, but of no great strength. It stands upon the river *Bacchilio*, and is also watered by the *Rero* or *Eretenus*, beside two little brooks called *Astichello* and *Seriola*. It is full of nobility and gentry, being said to have 200 families worth 1500 crowns *per annum* each, and better. So that there is a proverb in *Italy*, *Quanti ha Venetia de Ponti & Gondalieri, Tanti ha Vicenza de Conti & Cavalieri*.

Of the several changes of government, which this city hath undergone I shall say nothing, but for that refer the reader to *Schottus* and *Leander Albertus*: only it is worth the notice taking, that when they were set at liberty, and absolved of their oaths of allegiance by *Catharine* reliet of *Galeazzo Visconte* first Duke of *Milan*, they did of their own accord deliver up themselves to the state of *Venice*, for which reason they enjoy great privileges and immunities. The theatre of the academy called the *Olympici* is a pretty building and deserves to be remember'd. The inhabitants of this city drive a great trade in breeding and feeding of silk-worms, and in winding, twisting, and dying of silk. The wines of this territory are very rich and gustful, especially that sort called *Dolce & piccante*.

† Such as are those of *Poolhole* in *Derbyshire*, *Wokey-hole* in *Somersetshire*, and other subterraneous grots as well in *England* as beyond the seas.

Hence

Hence we made an excursion of about six miles, to see the famous cave of *Custoza*, said by some to be seven miles in length; but more truly by *Jo. Georgius Trissinus* (who himself measured it, and gives an account of it in a letter to *Leander Albertus*) no more than 650 perches, which made about 4000 feet in length, 490 perches or 3000 foot in breadth, and about three miles in circuit. We took it to be nothing else but a cave left from the digging of stone; as the same *Trissinus* by sufficient arguments proves it to be. 1. Because the ancient buildings of *Padua* and *Vicenza* are of the same kind of stone. 2. Because to support the roof they have every where at distances sometimes greater, sometimes less, left huge pilasters of the quarry, of three perches square a piece; of which pilasters in the whole cave there are thought to be about 1000. 3. There are some great square pieces of stone cut round about, in order to taking them up and carrying them away. 4. There remain manifest prints and tracks of cart-wheels; whereas no man living can remember that ever cart went in there.

We observed many bats clinging to the roof and walls of this cave; and in some standing waters a kind of fish or rather insect, which they called *Squilla Venetianæ*, i.e. venice-shrimps, but they are of that sort which naturalists call *Pulices marini* or *aquatici*, i. e. sea-fleas or water-fleas.

At this village we saw the so much talked of ventiduct belonging to one *Tridentus* a nobleman of *Vicenza*, serving to cool the rooms of his palace in summer time. From a large high-roofed subterraneous grot or cave there are channels cut out of the rock to the palace. When they would have a cool air in any of the rooms, they shut up a gate in the cave, and open a door at the end of the channel, which lets in the *fresco*, every room having a hole in the wall or pavement to admit it. On a stone there is this inscription, *Franciscus Tridenteus Vicentius fCtus Hierosolymitani equitis filius gelidi venti flatum in caverna Cubola vocatâ spirantem in ædes proprias per hanc crypto-porticum deduxit, ad temperandum ardentem & æstivos calores, tum cohibendo tum relaxando, novo atque mirabili artificio per cubicula quæque ducendo, quæ pro libitu suo refrigerare & calefacere valet:*
ita

ita ut ejus Villa ingenio, diligentia, impensa ac æmulatione ornatio effecta, inter regia ornamenta connumerari possit: Anno MDLX. Ætatis suæ XXII.

From *Vicenza* we journeyed to *Verona*, a fair, large populous city, pleasantly situate upon the river *Athesis*, which is here of a great breadth, over which there is one very fair stone-bridge esteemed the handsomest bridge in *Europe*, besides three others of less account. The city is seven miles in circuit, excluding the suburbs, which are very large too; and thought to contain 70000 souls. It is strong by situation, and extraordinary fortified with walls, bastions, towers, bulwarks, and deep ditches full of water drawn from the river *Athesis* round about, and strengthened with three castles; that of *St. Peter*, that of *St. Felix*, and ——— so that it is look'd upon as impregnable. Here we saw several cabinets of collections of natural and artificial rarities. 1. That of seignior *Mapheus Cusanus* an apothecary, wherein were shewn us many ancient *Egyptian* idols, taken out of the mummies, divers sorts of petrified shells, petrified cheese, cinnamon, sponge and mushrooms. A jasper stone and an agate having chrystal within them. Stones having upon them the perfect impresson or signature of the ribs and whole spines of fishes. A *Catapulta* of brass found 1656, about *Trent*. Several curious *entaglia's* or stones engraved with figures of heads, &c. An ancient *Roman* gold ring. A good collection of ancient *Roman* coins and medals, as well consulary as imperial, besides modern medals. A stone called *Oculus mandi, n. d.* which when dry shews cloudy and opaque, but when put into water, grows clear and transparent. An account of this stone may be seen in the *History of the Royal Society*, brought in by *Dr. Goddard*. Among his medals we observed a *Maximinian* and a *Dioclesian*, with this on the reverse inscribed, *Veronæ Amphitheatrum*.

2. That of seignior *Muscardo*, a gentleman of *Verona*, a civil and obliging person. He also hath a very good collection of ancient *Roman* medals, among which he shew'd us an *Otha* of gold, and told us that those of brass were all counterfeit, there having never been any found of that metal. Many sorts of lachrymal urns and lamps, great variety of shells and some fruits and parts of plants petrified.

petrified. Several exotic fruits and seeds: the ores of metals and minerals: gems and precious stones in their matrices as they grew: *Lapis obsidianus* and a kind of stone called *Adarce*. But because there is a description of this *Museum* published in *Italian*, I shall not descend to more particulars, but refer the reader thither.

3. The *Museum* of seignior *Maria Sala* an apothecary, containing only some reliques of *Calceolari*'s *Museum*, printed many years ago.

The *Amphitheatre* of *Verona*, called now the *Arena*, is a very stately and capacious one, and seem'd to me when it was intire not to have been much inferior either for beauty or greatness to that of *Titus* at *Rome*. The outward wall or circle is all gone save a little piece, from whence we may make an estimate of the height and beauty of the whole. The remaining setting aside this exterior circle is kept in good repair by the *Veronese*; the *Arena* of it is thirty-four * *pertiche* long and twenty two and half broad, and compass'd about by forty two rows of stone benches one above another, after the manner of stairs, upon which 23000 persons may sit commodiously. As it is imperfect it seem'd to us one of the most pleasant and goodly spectacles for a structure of that nature that ever was beheld. He that desires a more full and particular description of it may consult *Schottus*, and the antiquities of *Verona* written by *Torellus Saraina* a *Veronese*, as also *Lipsius*'s Book *de Amphitheatris*.

As for government and subjection this city underwent almost the same changes with *Padua* and *Vicenza*, and did also voluntarily deliver itself up to the *Venetian* government. Here are very good white wines, especially that sort they call *Garganico*. The air is clear and healthful, but must needs be sharp in winter time, being so near the high mountains: among which *Baldus* is famous for the great variety of choice simples growing thereon; of which *Joan. Pona*, an apothecary of *Verona*, hath written a particular catalogue and description. Which book, and thereupon the *Paduan* herb-
arists making simple voyages yearly thither, hath gotten *Baldus* its reputation; for I am very confident that

* The length of a *pertica* or *perch* of this measure is somewhat more than six foot.

many hills about the *Alps* produce as great variety and as choice plants as that.

Not far from *Verona* is the *Lago di Garda*, antiently called *Lacus Benacus*, which furnishes the city with plenty of excellent fish, especially trouts, *Sardinie*, and a certain fish of the trout kind, called *Carpione*, peculiar to this lake. Those we saw were not a foot long, of the fashion of a trout.

Feb. 9,
Mantua.

We travell'd from *Verona* to *Mantua* 24 miles, by the way passing through some large villages, but no considerable town. Six miles short of *Mantua*, at a place called *Marmirola*, we viewed an elegant palace of the Duke's, richly furnish'd and adorn'd with pictures and statues. The city of *Mantua* is of great antiquity, strong by situation, as standing in the middle of a lake, and well fortified. *Schottus* saith, that it is 4 miles in circuit, hath 8 gates, and about 50,000 souls. It seem'd to us a great city, but not answerably populous; having not yet recover'd itself of the losses it sustain'd when it was miserably sack'd by the Emperor *Ferdinand II's* army in the year 1630. A little out of the city stands a pretty house of the Duke's, called *Palazzo del Te*, wherein there is a square room having the roof arched round in form of a *Cupola*, called the *Giant's-hall*; so contrived, that if two stand in the opposite corners, one laying his ear to the wall may hear what the other whispers with his face to the corner, which he that stands in the middle of the room, or in the corner on the same side, shall not. The like room we were told there is in the Duke of *Parma's* palace at *Caprarola*. Our whispering place in the cathedral church of *Glocester* is of somewhat a different make. In a village near *Mantua* called *Ande*, now *Petula*, was born the Prince of *Latine* poets *P. Virgilius Maro*. In this city are two societies of *Virtuosi* (academies they call them) the one stile themselves *Accesi*, the other *Timidi*.

This city hath, according to the fate of her neighbours, undergone several changes of government. In the year 1328. *Lewis Gonzaga*, by the favour of the people, made himself lord of it, from whom the present Duke is descended. In the year 1433. *John Francis Gonzaga* was created marquess of *Mantua*, by the Emperor

peror *Sigismund IV.* In the year 1530. *Frederic Gonzaga* was created Duke of *Mantua* by the Emperor *Charles V.*

The Duke's yearly revenue is said to be 400,000 crowns, according to the account we had of it in particulars somewhat less, viz. the mills pay 4000 crowns *per annum*; the *Jews* (who are about 6000 in number, and wear no badge of distinction) give 20,000 crowns *per annum*; the rest of the citizens of *Mantua* 70,000 crowns. The country yields 60,000 pistoles; and *Montferrat* 13000, in all 386000 crowns the year. Yet is the present Prince, through ill husbandry not proportioning his expences to his income, become very poor; being indebted to the *Venetians* (as *Leti* saith) four millions of crowns. To advance his revenue, at the time of our being there, he was put to that pitiful shift of debasing his coin, so that none of his money would pass further than his own territory. His name was *Carolus Gonzaga II.* since dead; and his son *Carolus Ferdinandus* succeeds him in his estates. There are besides of this family four or five small princes, feudatory of the Empire, but sovereign lords, having *Jura Regalia* in their petty states, viz. The Princes of 1. *Novellara*. 2. *Bozolo*. 3. *Guaftalla*. 4. *Sabionetta*, in which the male line is failed. 5. *Castiglione*. We were told that these princelets were obliged to attend the Duke of *Mantua's* court three months in the year. The Duke's council of state, or privy council, consists only of six of the chief nobility.

In these parts all the children of the common people have equal shares of their parents estates, at least their moveables. The wife, when her husband dies, carries her dowry back with her: if she dies first, then her children (if she leaves any) divide her dower equally among them. If she die childless, her dower is divided; half goes to her husband, and half to her next kindred. If a woman hath had children by one husband, and he dying, she marries again, and hath children by her second husband, her estate is divided into equal parts; one moiety goes to her first husband's children, and the other to her second's.

We took boat for *Ferrara*, which brought us first into the lake, then into the channel of the river *Mincius*, [which runs out of the *Lago di Garda* (called in Latin *Lacus Benacus*) at a strong fort of the *Venetians* called *Peschiera*, and, coming to *Mantua*, spreads itself into a lake of 5 miles long.] At 16 miles end we came to a bridge and sluice at a place called *Governo*, where we enter'd the river *Po*; going down stream we pass'd by *Ostia*, 10 miles distant from *Governo*; and 10 miles further down *Massa*, both on our left hand; and 7 miles below *Massa* came to *Stellata*, a large village on our right hand, under the Pope. Here the territory of *Mantua* ended. Eight miles beyond this place we left the river *Po* at a village called *Il Ponte*, and struck up an artificial channel of 4 miles long, which brought us straight to the gates of *Ferrara*.

This city is very considerable, as well for its greatness as its strength. It is said to be about 7 miles in compass, and, besides the advantage of its situation in a fenny level, it is strongly fortified with walls and bulwarks, and surrounded with a broad and deep trench full of water; so that I look upon it, for a city of that bigness, as the strongest in all *Italy*. It had formerly a Prince of its own, but is now, with all its territory, subject to the Pope. From *Ferrara* we went with the *Procaccio* or courier to *Bologna*, shifting our boat at a place called *Mal-Albergo*, some 17 miles from *Ferrara*, where we went up into a higher channel, viz. the *Rhenus Bononiensis*, and, passing through 9 locks or *sastegni*, we arrived at *Bologna*, distant by water from *Ferrara* 45 miles. A great part of the country we pass'd through between *Ferrara* and *Bologna* is a perfect level, and fenny ground, much like to the isle of *Ely* in *England*.

Bologna.

Bononia is a large city, of a round figure, and yet 7 or 8 miles in circuit. The houses not tall; fair portico's on each side the streets, convenient to walk in, as well in summer to defend one from the scorching beams of the sun, as in winter to shelter from the rain. Many gentlemen's houses (palaces they call them) which make no great shew outwardly in the street, but within are very handsome and very convenient, having more in the recess than they promise in the front. The number

ber of inhabitants is about 80,000 souls. The *Bologna* saufages, wash-balls, and little dogs are much esteemed and talk'd of in all *Italy*, and elfewhere. Here is also a great silk trade driven, and the best engines for winding and twisting of it that we have any where seen. The univerfity of *Bologna* is one of the moft ancient and famous in *Europe*, efpecially for the ftudy of the law. There is fuch a multitude of professors in all faculties, that I am afraid few readers will have the patience to run over the lift of them, which, for the fatisfaction of the curious, I here exhibit.

The *Series Lectionum* of the Univerfity of the Jurifts.

Classes Matutinæ.

Primâ hora in pulſu Campanæ.

Ad Leâturam Decret. extraord.

Illuſtriſſimus D. Rector. Vacat.

*Ad Leâturam Decret. ordin. Legant de Conſtitut. uſque
ad Tit. de off. Delegat.*

D. Franciſcus Matheſilanus.

Rus. D. Proſper Pollinus Metrop. Præpoſ.

D. Jo. Baptiſta Dulfus.

D. Jo. Bapt. Panzacchius Abbas.

D. Petrus de Sandris.

D. Raphael Bertucerus S. Petronii Canonicus.

D. Conſtantius Scaſellius.

D. Alexander de Domnis.

D. Julius Argolus Metropol. Canonicus.

D. Abbas Citius Maria Guidonus Metrop.

Secundâ

Secundâ Horâ.

Ad Lecturam off. Veteris ordin. Leg. tit. ff. De off. ejus cui mandata est jurisdictio.

- D. Franciscus Barbadorius emeritus.
 D. Alfonsus Arnoldus S. Petronii Canon.
 D. Matthæus Griffonius S. Petronii Canon.
 D. Nicolaus Allé.
 D. Jac. de Gottis.
 D. Hippolytus Farnafarius Abbas.
 D. Odoardus Guidonus.
 D. Antonius Francavatia.

Tertiâ Horâ.

Ad Lecturam Summæ Rolandinæ.

- D. Carolus Dulphus.

Ad Lecturam Sexti & Clementinarum.

- D. Co. Franciscus Ursius.
 D. Carolus Gaggius.
 D. Augustinus de Balthaffaris.
 D. Leonardus Bacchionus Caccaneus.
 D. Christoph. Gulinellus.
 D. Franciscus Guidonus.

Ad Lecturam de Maleficiis, Legant unicam de Raptu Virginum.

- D. Gasper Elephantucius.
 D. Joseph Coltellinus.
 D. Petrus Pomp. Vincentius Mantachetus.

Quarta Horâ.

Ad Lecturam de Verb. signific.

- D. Christoph. Lucatellus.
 D. Jo. Antonius Fantellus.
 D. Hieronymus de S. Petro Metrop. Canon. abs. cum
 ref.

*Ad Lecturam repetit. part. Legant primo omnes Populi
ff. de just. & jure, deinde legant de minoribus 25 annis.*

- D. Jo. Baptista de Aftis.
- D. Calabrebius Pistorinus.
- D. Hippol. Franc. Vineia abs. cum. ref.
- D. Dominicus Medices.
- D. Hippol. Maria de Conventis.
- D. Laurentius Simonius.

Ad Practicam Judicario.

- D. Paulus Zanias.
- D. Johannes Calvus.

Ad Lecturam Pandectar.

- D. Alexander Sanutus Pellicanus.

Classes Pomeridianæ.

Primâ Horâ in pulsu Companæ.

*Ad Lecturam Instit. Legant tit. de usufructu, deinde
transeant ad tit. de usucapionibus.*

- D. Joannes Mazzantus.
- D. Clemens Leonius abs. cum reserv.
- D. Franciscus Maria Burdocchius.
- D. Horatius Battalia.
- D. Anton. Franc. Siverius.
- D. Jacobus Maria Ugolottus.
- D. Gasper Vincens Berna.
- D. Camillus Bernardinus Albanus.
- D. Joan. Antonius Ruinus.
- D. Laurentius Placentus.
- D. Prosper Cattalanus.
- D. Onuphrius Rabastens Col. major. S. Clem. Hisp.

Secundâ Horâ.

*Ad Lecturam ff. legant tit. de novi operis nunciat.
deinde tit. de acquirend. Possess.*

OBSERVATIONS *Topographical,*

- Excellentissimus D. Cornelius Canalius emeritus.
 D. Franciscus Munarius ætate ff. Metrop. Canon.
 S. P.
 D. Joan. Baptista Farnasarius.
 D. Carolus Antonius de Blasius.
 D. Joseph Franchinus.

Tertiâ Horâ.

*Ad Lecturam Decret. Legant in causis incipiendo à
 Prima.*

- D. Hippolytus Nanius Elephantuccius.
 D. Co. Annibal de Blanchis Metrop. Canonicus.
 D. Felicianus Mollinus. Coll. maj.
 S. Clem. Hisp.

Ad Lecturam C. lib. X.

- D. Carolus de Landis.
 D. Paulus Forada, Coll. maj. S. Clem. Hisp.

*Ad Lecturam Decretal. Legant de Regularibus &
 transeuntibus ad Religionem.*

- D. Alexander Barberius.
 D. Co. Hieronymus Boschettus.

Ad Lecturam de regulis Juris.

- D. Petrus de Maffis.
 D. Franciscus Maria Cuccus.

*Quartâ Horâ.**Ad Lecturam de feudis.*

- D. Jo. Baptista Giovagonius abs. cum reserv.
 D. Julius Carcellerius.

*Ad Lecturam Institut. Legant tit. de usufructu, deinde
 transeant ad tit. de usucapionib.*

- D. Co. Ludovicus Marfilius abs. cum reserv.
 D. Jo. Baptista Sannutus Pellicanus.
 D. Jacobus Danielus.

D. Al-

Moral, and Physiological.

195

- D. Albertus de Planis.
P. Abbas Petrus Hercules Abergettus abs. cum reserv.
D. Rochus Franc. Bonfiolus.
D. Gaspar Linder.
D. Fabius Bordacchius.
D. Hercules Maria Matthiolus.

Lecturæ Universitatis.

Ad Lecturam Decretorum.

D. ---

Ad Lecturam Sexti & Clementinarum.

D. ---

Ad Lecturam Decret. extraord.

D. ---

Ad Lecturam Decret. sive Infortiati ordinari.

D. ---

Ad Lecturam Voluminis.

D. ---

Ad Lecturam ff. novi seu C. extraordinari.

D. ---

The Series Lectionum of the University of the Artists.

Classes Matutinæ.

Prima Hora in pulsu Campanæ.

Ad Lecturam Medicinæ extraordinariam.

Illustrissimus Dominus Rector, vacat.

Ad Lecturam Chirurgiæ legant de Ulceribus.

- D. Jo. August. Cuccus emeritus, Q. S. A.
D. Albertus de Fabris.
D. Alexander Guicciardinus.

Ad Anatomem.

- D. Jo. August. Cuccus emeritus, Q. S. A.
D. Albertus de Fabris.

OBSERVATIONS Topographical,

D. Jo. Baptista Capponius

D. Carolus Galeratus.

D. Joan. de Laurentiis.

Ad Lecturam Simplicium Medicinalium.

D. Hyacinthus Ambrosius.

Ad Lecturam humanarum literarum.

D. Cosmus Gualdandus.

*Ad Lecturam Logicæ, Legant secundum librum
Posteriorum.*

D. Dominicus Maria Burgus.

D. Dominicus Clericus.

D. Aloysius Magnus.

*Secundâ Horâ.**Ad Theoricam Medicinæ ordinariam, Legant Aphorismos
Hippocratis.*

D. Petrus Jacobus Florenus.

D. Carolus Galleratus.

D. Joan. de Laurentiis.

D. Joan. Antonius Castarius.

Ad Lecturam Logicæ, Legant secundum lib. Posteriorum.

D. Secinius Orettus.

D. Carolus Ant. Siverius.

D. Andreas Bandéria.

D. Marius Marianus.

*Tertiâ Horâ.**Ad Practicam Medicinæ extraord. Legant 4 partem
primi Avicennæ.*

D. Jacobus Accurtius.

D. Jo. Baptista Lingarus.

D. Jo. Car. Matthosillanus.

D. Vincentius Franchinus.

D. Florianus Bertellus.

D. Barthol. Raymundus.

Ad Philosophiam ordinariam, Legant Parva naturalia.

D. Fulvius Magnanus.

D. —

Ad

Ad Lecturam Metaphysicæ, Legant primum librum.
P. Mr. Laurentius de Fabris, Franciscus.

Ad Lecturam humanarum literarum.

D. Laurentius Grimaldus abf. cum reserv.

Quartâ Horâ.

Ad Philosophiam moralem, Legant de Amicitia.

D. Ovidius Montalbanus.

D. Jacobus Servanus, S. Petronii Canonicus.

*Ad Lecturam Logicæ, Legant secundum lib.
Posteriorum.*

D. Raymundus Abellus.

D. Bartholomæus Ferrarius.

Ad Lecturam Humanarum liter.

D. Michael B.

Ad Mechanicas.

D. Petrus Mengolus.

Ad Particulas Græcas Domi.

D. —

Ad Arithmeticam Domi.

D. Simon Mengolus.

Ad Grammaticam Domi.

D. Nicolaus Banderia.

D. Bonaventura Rubens.

Classes Pomeridianæ.

Primâ Horâ in pulsu Campanæ.

*Ad Theoricam Medicinæ extraord. Legant primam
partem Avicennæ.*

D. Jo. Carol. Lancius Paltronus.

OBSERVATIONS *Topographical,*

- D. Angelus Antonius Livizanus.
 D. Ludovicus Lodius.
 D. Berlingerus de Solitis Syracufanus.

Ad Lecturam Sacræ Scripturæ Legant ad Beneplacitum.

P. M. Ericus Marchettus Servita.

Secundâ Horâ.

Ad Practicam Medicinæ ordin. Legant de Febris.

- D. Jo. Baptista Capponius.
 D. Robertus Muratorius.
 D. Marcellus Malpighius abs. cum reserv.
 D. Carolus Fracassatus.
 D. Raymundus M. Pistorinus.

Ad Philosophiam extraord. Legant de Anima.

- D. Cæsar Zoppius.
 P. M. Vitalis Ferra-rubeus Mon. Cassinus.
 D. Petrus Maria Cianus.
 P. M. Marc. Ant. Fabianus de Caritate.

Tertiâ Horâ.

Ad Lecturam Metaphysicæ, Legant duodecimum librum.

- P. Abb. Fabianus de Landis. Can. abs. Lat. cum reserv.
 D. Flavius Zinus.

Ad Philosophiam ordin. Legant de Cælo & mundo.

- D. Franciscus Natalis.
 D. Alexander Magnus.
 D. Franciscus Gherardus.
 D. Carolus Saxius.

Quartâ Horâ.

Ad Practicam Medicinæ extraord. Legant ad beneplacit.

- P. Pompeius Bolognietus emeritus.
 D. Carolus Riarius.
 D. Franciscus Sacentus.

*Ad Lecturam S. Theologiæ Scholasticæ Leg. primum
lib. Sentent.*

P. M. Ant. Mar. Gherardus Francisc.
D. Gregorius Fallonus Hibernus.
P. M. Sac. Philip. Pollinus Dominicanus.

Ad Lecturam Casuum Conscientiæ.

P. Car. Anton. Jeachimus.

Ad Mathematicam, Legant Astronomiam Ptolemæi.

P. M. Joannes Riccius Carmelita.
D. Jo. Dominicus Cassinus Januens.

Ad Artem Scribendi.

D. Franciscus Guidicellus.
B. Jo. Andreas de Abantis.

Lecturæ Universitatis.

Ad Lecturam Medicinæ.

D.---

Ad Lecturam Philosophiæ.

D.---

Ad Lecturam Astronomiæ.

D.---

Ad Lecturam Rhetoricæ.

D.---

At *Bononia* we saw the formerly famous exercise of jousting or tilting, which is there still used in carnival time. The combatants being mounted on horse-back, armed cap-a-pee, and adorned with huge plumes of feathers and scarfs, with lances in their hands, run one at another a full gallop, one on one side, and another on the other side of a low rail. They aim at one particular part (I think it is the eye) and he that comes nearest is the best juster. We saw several lances broken, but no person dismounted, nor any hurt done.

OBSERVATIONS *Topographical*

Here, by the favour of Dr. *Ovidio Montalbano*, one of the professors, we had a sight of the *Museum* of *Aldrovandus*, which by his last will he left as a legacy to the city. It is kept in the cardinal legate's palace, commonly called *Palazzo del Confaloniero*. Among many natural and artificial rarities therein preserved, we took more especial notice of ten volumes of the pictures of plants, and six of birds, beasts, and fishes, drawn exactly in colours by the hand.

The same Dr. *Montalbanus* very civilly brought us to the house of *Jacobus Zenoni*, an apothecary, a skilful herbarist, and a collector of rarities; who among other things shewed us three pieces of rock-chrystal, with drops of water inclosed in the middle of them, which we could plainly perceive when the chrystal was moved to and fro. He hath a garden well stored with simples, wherein we noted *Arundo nastos sive farcta*, in ripis Rheni Bononiensis: *Solanum Americanum fructu molli*. Eyst. *Geranium triste* Cornuti: *Scammonea Syriaca*; *Polytrichum Alpinum inciso folio, costâ viridi*; *Convolvulus Althææ folio non inciso*; *Pentaphyllum lucidum folio hirsuto*, ab ipso inventum propè Rhenum Bononiensem; *Malva Alpina folio laciniato*; *Jacobæa folio Betonicæ*, n. d. *Abrotanum fœmina inodorum*; *Bardana de Congo*; *Helleborus niger trifolius spinosus*; *Cyclamen Baldense folio rotundo, flore odorato*; *Thlaspi folio Sampsuchi*; item folio sedi; *Daucus Creticus verus*; *Stachys Cretica Salvicæ folio*; *Clematis Smilaci Asperæ similis, verum non aspera*; *Clematis tetraphylla Americana*; *Malva folio Betonicæ*, ab ipso inventa; *Labrum Veneris Indicum altissimum*; *Eruca Tanaceti folio*; *Genista Alpina sive Spartium*. Col. *Adiantum nigrum ramosum Canadense* Cornut. *Chamædryos spuria species*, ab ipso inventa propè Rhenum fl. Bononiensem; besides many others which had not yet put forth, it being early in the spring.

The same day we visited signior *Gioseppi Bucemi*, a chymist, who prepares the * *Bononian stone*, or *Lapis Phosphorus*, which, if exposed a while to the illuminated air, will imbibe the light, so that withdrawn into a dark room, and there look'd upon, it will appear like a

* The *Lapis Phosphorus* or shining stone,

burning

burning coal; but in a short time gradually loses its shining, till again exposed to the light. The crude stone is like a kind of sparre, or *fluor*; it acquires this quality by being calcin'd (as he told us) in any small furnace, laying the pieces of stone upon an iron grate over a fire of wood. But we believe there is somewhat more of mystery in it; for some of us calcining part of the stone we purchased of him according to his direction, it sortd not to make it shine. The prepared stone in time loses its virtue, and ceases to shine, as we found by experience in those pieces we bought and brought along with us. Hereabout, and all along as we rode in *Lombardy*, we saw now in flower *Aconitum hyemale*, called by some *Anemone Bononiensium*.

We left *Bologna*, and travelled to *Modena*, by the Feb. 22. way, about fifteen miles from *Bol*, passing by *Castel-Castel-Franco*, a strong fort near a village called *Villa Franca*, *Franco*. built by Pope *Urban VIII.* on the frontier of *Modena*.

Modena is twenty miles distant from *Bononia*, no great *Modena*. city, but for the bigness populous, being the place of the Duke's usual residence; which must needs draw company and business. It is encompassed about with a thick wall and a broad ditch, and tolerably well fortified with bastions and outworks. Here, as at *Bononia*, *Padua*, and several other cities in *Lombardy* and *Friuli*, are *portico's* or cloisters (rows they call them at *Chester*) on each side the streets to walk in. The houses are most built of brick, and but of mean heighth, as we observed them to be in all those cities where the streets were cloister'd on both sides, which we conjecture was the manner of building of the *Goths* or *Lombards* that invaded *Italy*, and settled themselves in these parts.

Here we saw the Duke's palace, which, tho' it be not vast, nor makes any great shew outwardly; yet are the rooms within very elegant and richly adorned with gilding, hangings, and pictures of the best masters. What we most minded was the cabinet or *musæum*, furnished with choice of natural rarities, jewels, ancient and modern coins and medals, ancient and modern entaglia's, curious turn'd works, dried plants pasted upon smooth boards whiten'd with cerufs, which may be put in frames and

and hung about a room like pictures; and a great collection of designs of the best painters. Among other things we took notice of a human head petrified; a hen's egg, having on one side the signature of the sun, which I the rather noted, because some years before Sir *Thomas Brown* of *Norwich* sent me the picture of one, having the perfect signature of a duck swimming upon it, which he assured me was natural. Moss included in a piece of chrystal, silver in another. A fly plainly discernible in a piece of amber. A *Chinese* calendar written on wooden leaves. *Almericus*, father to the present Duke (who at our being there was a child of about three years old) made this collection, and was treating with *Manfredus Septalius*, canon at *Milan*, for his cabinet, so much talked of all over *Italy*; for which they told us he was to give 1000 pistoles: but before the bargain was concluded, the Duke died in the twenty-eighth year of his age.

The revenues of this Prince are said to be 350000 crowns *per ann.* his ordinary expences not to exceed 180000.

In a mountain in this territory called *Zibba*, nigh *Paiuli* castle, some twenty-eight miles distant from *Modena*, is a fountain where *Petroleum* issues out of the earth. In another mountain called *Monte Nicani*, are found petrified cochles and other shells.

Feb. 24.

Reggio.

We began our journey to *Parma*, and at seven miles end forded the river *Serchio*, passing by a strong little town on our left hand, called *Rubiera*, and after eight miles more enter'd *Reggio*, a city almost as big as *Modena*, and of equal strength, subject to the same Prince, who is called Duke of *Modena*, and *Reggio*. It is more extended in length, and makes a fairer shew, having one broad and long street. Here there are many sculptors, who make pretty carved works in ivory and wood, for which this town is noted. Ten miles outward we passed a long bridge over the river *Lenzo*, and enter'd the Duke of *Parma's* country; and five miles more brought us to *Parma*, a larger city than *Modena*, of a round figure, well built of brick, tho' the houses be not tall. The streets broad and well paved, but no
portico's

portico's under the houses. In short it is a very pleasant and handsome town, but not so well fortified as many other cities in *Italy*.

We travelled to *Piacenza*. At six miles distance *Feb. 26.* from *Parma* we ferried over the river *Taro*. Nine *Piacenza.* miles further we came to a large *Burgo* called *St. Donin*. Eight miles beyond *St. Donin* we pass'd through a pretty little town called *Fiorenzuolo*, and just with-*Fioren-* out the town cross'd the river *Arta*; and, proceeding *zuolo.* on still twelve miles, we came to *Piacenza*, a city, for bigness not inferior to *Parma*, and for strength superior (being well walled and trenched about, and having a strong citadel) but not so handsome and well built. The revenues of the Duke of *Parma* are said by some to be 500000, by some but 400000 crowns per ann. He keeps 3000 foot, and 1000 horse in constant pay; and can, upon occasion, raise 20000 foot, and 1000 horse more. Besides *Parma* and *Piacenza*, he holds in the state of the church the dukedom of *Castro*, and the county of *Ronciglione*, the first of which was pawned to the *Pope*, and, for want of payment of the money, forfeited to the church, concerning the restitution whereof there hath been such a stir of late. He holds also five cities in *Abruzzo*. The present Duke's name is *Ranutius Farnesius*.

We rode to *Crema*, 13 miles from *Piacenza*, passing 27. through *Castigno*, a large burgo in the state of *Milan*, two miles thence ferrying over the river *Adda*, and two miles further the river *Serio*, which runs into the *Adda*. Here we enter'd the *Venetian* territory, and at the end of other five miles arrived at *Crema*, no great city, but strongly *Crema.* fenced and fortified, and for the bigness populous; held with a good garrison of about 500 souldiers by the *Venetians*, as being a frontier place. It is situate in a fair and spacious plain, near the river *Serio*, and hath a large territory about it, called *Cremaſco*. This city is famous for fine thread made by the nuns, and little brushes made of the roots of a kind of grass called *Capriole*, which I take to be *Gramen Scaparium ischæmi paniculis* of *Label*.

We

29. We hired horses for *Brescia*, thirty miles distant from *Brescia*. *Crema*. By the way we rode through 1. a little town called *Osanengo*, about three miles from *Crema*. 2. *Romanengo*, a great burgo with a small castle, belonging to the King of *Spain*, some three miles from *Osanengo*: and about four miles further onward 3. *Soncin*, a considerable wall'd town in the dutchy of *Milan*, which *Schottus* takes notice of as a very civil place to strangers, and mentions *panem ex Amygdalis dulcibus & lucernas præstantissimas ex orichalco* made there. Near this town we ferried over the river *Oy* or *Ollius*, and enter'd again into the *Venetian* territory. Two miles off this place we rode close by *L'orzi nuovi*, a small town, but one of the best fortified places we have seen, carefully guarded by a good garrison which the *Venetians* maintain there. Two miles from this fortress we passed a great village called *L'orzi vecchi*, then several villages the most considerable whereof was *Lo grado*. Hereabout and at *L'orzi nuovi*, is great store of flax planted, and fine linnen cloth made. The country we rode through this day was full of villages and well peopled, divided into small fields, and those inclosed with hedges like our inclosed countries in *England*.

Brescia. The city of *Brescia* is less than *Verona*; but considering the bigness more populous, well built, having broad and streight streets, paved with stone in the middle, and with bricks set edge ways on each side, after the manner of the *Holland* cities; as are also the streets of *Parma*, *Piacenza*, and *Crema*. It is encompassed with two walls, the interior of old building more slight and weak, the exterior of good strength, and thickness, with a broad trench before it. The inhabitants are very busy and industrious, driving a great trade of making guns and other iron ware. The *Brescian* guns are much esteemed not only in *Italy*, but all over *Europe*, as well for the goodness of the iron and temper, as the excellency and neatness of the workmanship. The markets are well stored with all things necessary for human life. The territory of this city is in length from *Mosò* near *Mantua* to *Dialengo* in the upper end of *Val Camonica* 100 miles, in breadth from *Limone* upon the *Lago di Garda* to *L'orzi nuovi* fifty; fruitful of corn and wine. The hills clothed

clothed with woods, and the vallies abundant in good pastures; so that there is excellent cheese made here, and sent abroad to *Venice* and other parts of *Italy*. In the mountains are iron and copper mines, which yield great profit to the owners, and enrich the whole country. Few cities in *Italy* have so large and so rich a territory, so populous and full of towns and great villages. The city itself hath often changed lords and governments, and was for a long time miserably torn in pieces, and wasted by intestine quarrels and fightings between the factions of the *Guelfs* and *Ghibellines*. The *Visconti* of *Milan* made themselves masters of it and held it for many years. In the time of *Philippus Maria*, the citizens being much oppressed and aggrieved, and having often in vain sent ambassadors to him for redress, they finally delivered themselves up to the *Venetians* in the year 1426, who now keep in garrison for the security of this city 800 soldiers, and 300 more in the castle, which stands on a rocky hill and commands the whole town. On the sides of this hill we found serpent stones or *Cornua Ammonis*, besides other petrified shells.

We travelled to *Bergamo* passing through 1. *Hospita-Marchetta*, a village seven miles distant from *Brescia*. 2. *Cokai*, a large village five miles further. 3. *Palazzuolo*, a great *Palazzo* standing on a steep bank on each side the river *Ollio*. *zuolo*. We had a full view of the *Alps* all along as we rode. *Bergamo* is seated upon the side of a hill, and is a city of *Bergamo*, good account for greatness and strength, encompassed about with high strong walls, and a broad dry ditch or trench. The streets are narrow, but the houses fair. Upon the top of the hill above the city stands the castle, which though it be but a small place is strongly situate, and commands the town. They told us that there was a vault underground from the castle to the palace of the *Capitano*. Without the walls of the city are five large *borgo's* or suburbs. 1. That of *St. Leonardo* below the hill, which hath fair streets, and is inhabited by rich merchants. 2. That of *St. Antonio*. 3. Of *Sancta Catharina*. 4. *St. Thomaso* or *Borsa di pignole*. These three stand at some little distance one from another, and some of them are walled about. 5. *Borgo Canale* or *di S. Gotardo*. This city

city seemed to us a busy and thriving place. In the church of the *Augustines* cloister lies buried *Ambrosius Calepinus*, a monk of that order, author of the known dictionary, without any monument or inscription: in the priors cell they shewed us his picture with this subscribed.

F. Ambrosius, dictus Calepinus, Comitis Trussardi Calepii primi vallis Calepiæ feudatarii filius præclaro suo Dictionario nusquam antea ab aliquo excogitato (vulgo Calepinum nominant) cum Heremitanum hoc S. Augustini Monasterium, & Bergomum patriam suam egregie illustrasset, omnibus literarum studiosis utilissimus quievit in Domino Anno salutis MDXI. ætatis suæ 71.

This city hath undergone almost the same changes of lords and government with *Brescia*, and did likewise voluntarily deliver itself up to the *Venetians* in the year 1428, under whose government it continued till the year 1509, when the *Venetian* army was routed, broken, and utterly defeated by *Lewis XII* King of *France*, in the *Ghiara* of the river *Adda*, and then it submitted to him and remained at his devotion so long as he held the dutchy of *Milan*. In the Year 1512, the *French* being expelled *Italy*, it became subject to *Maximilian Sforza* Duke of *Milan*. By reason of some grievances it revolted from him and returned under the *Venetians*; but being besieged by *Raimundus Cardona* a *Spaniard*, viceroy of *Naples*, and captain of the league, with a great army, it was forced to surrender to the will of *Maximilian*, and to avoid pillaging to pay 40000 ducats of gold, whereas before it would not pay 10000, Anno 1514. In fine, Anno 1516, it again returned under the government of the *Venetians*, who continue to this day lords of it, and send thither a * *Podestà*, a *Capitano*, a *Camerlengo* and a *Castellano*. The *Italians* have a proverb

* i. e. A mayor, a governor, a chamberlain, and a governor of the castle.

of this city, *Se Bergamo fosse in pian Sarebbe piu bel che non è Milan.* If Bergamo stood in a plain it would be a fairer city than Milan.

N. B. After the forementioned rout and discomfiture of the Venetian army, not only Bergamo, but also Brescia, Verona, Vicenza, Padua, and the rest of the cities subject to them, save only Treviso, readily submitted to the Emperor and King of France; notwithstanding they were well fortified, and had strength enough to resist: so that the Venetians utterly despaired of and wholly gave up for lost all they had on the firm land of Italy; but yet in a short time they recovered it all again.

From Bergamo we rode to Calonica, a village in the state of Milan, seated upon the river Adda, where we took water for the city of Milan.



OF

M I L A N.

MILAN is one of the four principal cities of *Italy*; the other three being *Rome*, *Venice*, and *Naples*. It is called *la grande*, and well may it be so, being ten *Italian* miles in circuit: and yet (which is more) the figure of it approaches to a circle. It contains eleven collegiate churches, seventy one parishes, thirty convents of friars, eight of regular canons, and thirty six of nuns. The number of inhabitants of all sorts is said to be 300000, but I believe they who report it speak by guess and at random. All provisions for the belly are very plentiful and cheap here: so that it is a proverbial saying, *Solo in Milano si mangia*, They eat well only at *Milan*. The *Domo* or cathedral church is next to *St. Peter's* at *Rome* the greatest, most sumptuous and stately pile of building in *Italy*. It is 250 cubits long, and 130 broad, according to *Schottus*, and of an answerable height. A more particular description whereof may be seen in *Schottus*. The great hospital is the largest and most magnificent, I think, in *Europe*, more like a stately cloister or Prince's palace than an hospital. There is one great square court, surrounded with a double portico; the one below, the other above stairs; besides four or five other smaller courts. The revenues of this house amount to more than 50000 crowns yearly; and there are maintained in it about 4000 poor, infirm, and sick persons. In this city are many fair and large monasteries, and a great number of churches [of all sorts 238] beautified with exquisite pictures and statues of the best masters, and furnished with rich altar-pieces, reliques, vests, and other ornaments: the particulars may be seen in *Schottus* and others. The library called *Bibliotheca Ambrosiana* is a handsome building furnished with store of good

good books, and free for all persons, as well strangers as citizens, to enter into and make use of. It was founded by cardinal *Carlus Borromeus*, of whom they have made a saint. The college, called *Hermathenæum*, is a stately building, having a handsome court, encompassed with a double *portico* or cloister, one above the other. The pillars of both *portico's* are double, the lowermost of the *Ionick*, the upper of the *Tuscan* order.

The castle of *Milan* is esteemed one of the principal fortresses of *Europe*, as well for its strength (having never been taken by force) as for its greatness and beauty. This castle, since its first building, hath been twice enlarged; for the ancient castle, built by the *Visconti* (which is now the palace of the governor, and before which is a court, having a round stone-tower at each corner;) the *French* taking in a great space of ground, inclosed with a square wall of a very great heighth and thickness, and a deep ditch. Upon the top of this wall one may walk under cover round about; and from thence have a fair prospect of the country, and the new fortifications of the castle, or the new line added by the *Spaniards*, being of a pentagonal figure, and having at each angle a bastion or mount, and between every two bastions an half moon. It is well furnished round about with great guns ready mounted. Within the castle is a water-mill, which they told us was driven by water which springs up within the castle-walls. *Schottus* saith, that the circuit of the whole fortress, besides the trenches, is 1600 paces. The garrison, at our being there, consisted of about 600 soldiers, and the *Castellan*, or governor's name, was *Doni Balthasar Markadel*.

We saw the *Musæum*, or gallery of seignior *Manfredus Septalius*, son to *Ludovicus Septalius* the famous physician; wherein we took notice of a box with a multitude of looking-glasses, so disposed, as by mutual reflexion to multiply the object many times, so that one could see no end of them: the best in this kind that I have any where seen. A plain plate of glass with so many spherical protuberances wrought upon it, that if you look'd thro' it upon any object, you saw it so many times multiplied, as there were protuberances or

segments of spheres upon the plain of the glass. Likewise a *speculum* of the same fashion, by looking upon which through the former, you see your face so many times multiplied, as to be equal to the product of the sum of the protuberances of the one glass, multiplied into the sum of the protuberances of the other. Several concave burning *specula* of metal; and we saw the experiment of burning by reflexion. Several engines counterfeiting a perpetual motion, of which, afterward we understood the intrigue. Several *automata*, and clocks of divers fashions, among the rest two of a cylindrical figure, which moved without weight or spring, only by being placed upon an inclining plain, their own weight was the spring of their motion. Pieces of amber with flies, grasshoppers, and bees inclosed in them. Pieces of chrystal with grass, moss, leaves, insects, &c. inclosed in them. A large piece of chrystal with a drop of water in it, and in that water a bubble of air, which, as you turned the stone, moved upwards. A little cornelian with a great quantity of water inclosed in it. Pictures made of feathers by the *Indians*. A great collection as well of ancient as modern coins and medals. Several *Entaglie*, *Camei*, & *Nicoli*. The *Pietra imbroscata* of *Imperatus*, having the lively signatures of herbs and trees upon it. Of this sort is found plenty about *Florence*, where they polish them, and make cabinets of them. Perfumed knives. *Persian*, *Arabick*, *Chinese*, and *Japonick* manuscripts; and a *China* kalendar in wood. Great variety of shells. Telescopes and microscopes of his own making. A large piece of the *minera*, or matrix of emeralds, with the stones growing in it. Many musical instruments, and divers sorts of pipes of his own invention. Ancient rings. *Indian* scepters and bills made of stone. Several things petrified. Chymical oils extracted by himself without fire. The skeleton of a morrse's head. Divers and very large rhinoceros's horns, gazell's horns, and an unicorn's horn. Curious pieces of turned work of ivory, very fine and subtil. Several pieces of past and colour'd glass. Several pieces of most transparent chrystal-glass, excelling that of *Venice*, made and invented by himself. Fictitious *China*, or porcellane, of his own invention and making, hardly to be distinguished from

from the true. But there being a printed catalogue of this cabinet set out by the owner himself, I refer the reader thither for further satisfaction. In this city they work much in chrystal, making drinking-glasses and other vessels, cases for tweezers, seals, and an hundred pretty knacks of it: they also engrave figures upon it. They grind and polish it with a brass wheel, upon which they put the powder of *Smiris* mingled with water; and after, to smooth it, they use the powder of * *Sasse-mort*, which is a stone they find in the river fast by. This stone, by lying in the water, by degrees dies, from a heavy pebble first becoming light like a pumice, and afterward, if it lie longer in the water, crumbling to dust. Most ordinary stones by lying in this water, or where the water sometimes comes, will (as they told us) die in this manner, excepting the clear pellucid pebbles, which are immortal.

We left *Milan*, and began our journey to *Turin*. We ^{March 10.} rode all along upon the bank of the river *Navilio*, passing several small villages, leaving *Biagrasa*, a town of some ^{*Biagrasa*.} note, a little on our left hand, and lodged at *Busolora*, twenty-two miles distant from *Milan*. Here, in the hedges, we found *Fumaria bulbosa flore purpureo & albo* now in flower; as also *Aristolochia rotunda* in flower.

We passed thro' *Novara*, a strong town belonging to ^{II.} the *Spaniards*, ten miles distant from *Busolora*; and rode ^{*Novara*.} on ten miles further to *Vercelli*, belonging to the Duke ^{*Vercelli*.} of *Savoy*; a large town, but neither strong nor well peopled. This town was delivered up by the *Spaniards* to the Duke, when *Trin* was restored to the *Spaniards* by the *French*. We were told that the citizens pay ten times more to the Duke, than they did to the *Spaniards*, and for that cause such as are able leave the city, and remove to other places.

We travelled as far as a village called *Sian*, eighteen ^{12.} miles passing by a large borgo called *St. German*.

Being stopp'd by the waters, we were constrained to ^{13.} stay all night at *Chivas*, no more than eight miles forward.

We got safe to *Turin*, passing by the way many ^{14.} waters, two we ferried over, viz. *Orco* and *Stura*.

i. e. Dead-stone.

Turin.

Turin, anciently *Augusta Taurinorum*, seated upon the river *Padus* or *Po*, is no large city, but, by reason the Duke of *Savoy* usually keeps his court there, frequent and populous. The ancient buildings are not better than those of our *English* towns: but there is one long street of new buildings, tall and uniform; and about the midst of it a large square piazza, having on each side a fair cloister, very handsome and sightly. At one end of this street is another piazza before the Duke's palace, a fair building, but not yet finished. Here is a citadel with five bastions, serving as well to bridle as defend the town. Here we met with some of the *Protestants* of the vallies of *Lucern* and *Angrona*, who told us, that, by the intercession of the cantons of *Zurich* and *Bern*, the Duke hath at present made an accord with them, permitting them still to enjoy the liberty of their religion. They dwell in fourteen *pagi*, or villages, have no town, are in number about 15000 souls, and of them about 2000 fighting men. These are divided into fourteen companies under so many captains, among whom, *Jean Fanneville* is noted for a valiant man, and a good soldier. The *Papists* call these men *Barbetti* and *Genevrini*. They are the only *Protestants* in *Italy*, and have maintain'd the purity of their religion all along these 1200 years. They run over the mountains like *Chamois*, never shooting (if they themselves may be believ'd) but they hit. They boasted to us, that in the late war they had not lost above 40 or 50 men, and had killed 500 of the Duke's; nevertheless the Duke hath built a strong fortress at a place called *La Torre*, in the middle of them.

The city of *Turin* hath an university, and boasts to have been the first that brought the use of printing into *Italy*. All provisions are plentiful and cheap there, the country round about being very rich and fertile. Indeed the whole principality of *Piemont* is esteemed inferior to no part of *Italy* for pleasantness, and plenty of corn, cattle, wine, fruit, hemp, flax, metals, and almost every thing necessary for human life: and withal it is so populous, that the *Italians* use to say, that the Duke of *Savoy* hath only one city in *Italy* of 300 miles in compass. It
hath

hath eight episcopal cities and 150 towns. The inhabitants are more given to husbandry than merchandise, so that the land is no where better cultivated than in *Piemont*. They are also very affectionate to their Prince, and for his honour and safety ready upon all occasions to venture their lives and fortunes. *Leti* saith that they are good soldiers, expert in warlike exercises, and so valiant that they will rather die than turn their backs. Of the riches of this country we may (saith he) take an estimate by the late wars which continued for twenty three years, during which time were maintained by the Duke in garrison, and in the field, between twenty five and thirty thousand soldiers, for the most part without any assistance or supplies of money or men from any other place but *Piemont*; which besides all this contributed to the Duke in fifteen years eleven millions. The same author saith, it is not in *Piemont* as in other countries, wherein there are some persons excessive rich, but the generality of the people extremely poor: but on the contrary the *Piemontese* are generally well to live, and there are very few among them of extraordinary estates.

As for the Duke he by all mens confession keeps a splendid and regal court, answerable to his title of Royal Highness. His annual revenue is said to be a million of gold: according to *Leti* 1800000 crowns; of which *Piemont* alone yields 1400000. He is able to bring into the field 30000 foot, and 5000 horse, and yet leave enough at home to guard the country. The states which the Duke possesses in *Italy* are, the principality of *Piemont*, the marquesates of *Saluzzes* (which he had of the French in exchange for *la Bresse*) and of *Asti*; the dutchy of *Aosta*; the counties or earldoms of *Nizza*, and of *Vercelli*.

The present Duke's name is *Carolus Emanuel*, son of *Victor Amadeus*: he was at the time of our being there about thirty years of age; and was then in mourning for his dutchess *Francesca Borbona*, and his mother *Christiana di Francia*, whom they call Madam Royal, who were lately dead. He hath two or three handsome palaces near the city, adorned with rich hangings, good pictures, and other furniture. 1. That called the *Venery*, or hunting palace lately built. 2. *Millesiore*. 3. *Valentine*.

The making of oil'd cloth for hoods, hat-cases, and coats to fence off the rain, was first invented at *Turin* by one *Giacomo Marigi*, and is still held as a secret by them, though now it be done in other places as well as there.

- Mar.* 17. We took horses and a guide at *Turin* for *Genoa*, which we reach'd at three days end. About a mile below *Turin* we pass'd the river *Po* (which here begins to be navigable) by a bridge; and after we had rode about a mile further, by the river's side, we mounted the hills under which the river hereabout runs, which are very steep and difficult to ascend. Not far from the foot of these mountains, in the woods wherewith they are cover'd, and, in the ditches by the way-side, I observed growing wild, * *Dens caninus flore purpureo* Ger. *Leucium bulbosum vulgare* C. B. *Dentaria aphyllus* Clus. five *Anb'atum Cordi*. *Doronicum vulgare* J. B. *Hepaticum Trifolium* Lob. *Hyacinthus botryodes* 2 Clus. This grew plentifully on the banks and borders of the corn-fields, and by the way-sides all along as we rode from *Turin* to *Genoa*. At five miles distance from *Turin* we passed through a pretty large town called *Chier*, where we took notice of a triumphal arch erected to *Victor Amadeus*, father to the present Duke of *Savoy*. About four miles further we passed by a walled town called *Villa nova*; and this first night lodged at *Aste*, a large town, but that seem'd to us to be poor and decaying, twenty miles distant from *Turin*.

18. We proceeded on our journey as far as *Nove*, a pretty large town under the *Genoese*, 27 *Piemont* miles distant from *Aste*; I think they may well pass for 35 *English*. About 4 miles from *Aste*, upon the bank of the river *Tanar* (which is there very high) and on the sands under the bank we found great variety of petrified shells, as oysters, scallops, cochles, &c. As also those *Tubili striati*, called by some *Antales*, which Seignior *Rosaccio*, a mountebank in *Venice*, first shew'd us: *Belemnites*, and other rare sorts of stones. In the corn-fields we passed

* i. e. Dog's-tooth violet; common bulbous violet; the greater tooth wort; common leopard's bane; the lesser grape hyacinth, and hepatica, or noble liver-wort.

through we observed * *Ornithogalum luteum* C. B. in great plenty now in flower. This day we passed by a large village called *Non*, and another which had formerly been walled called *Felizan*: then *Alexandria*, a large town upon the river *Tanar*, of more strength than beauty; the buildings both publick and private being generally but mean. It was so called in honour of Pope *Alexander III*; because in his time it was peopled by the *Milaneſe*, whose city was then almost quite deſtroy'd and made deſolate by the Emperor *Frederick Barbaroſſa*, for ſiding with the Pope againſt him. The river (which ſeemed to me as large as the *Po* at *Turin*) divides the city into two parts, which are joined together by a fair brick bridge. In our paſſage through the town we took notice of a triumphal arch erected to *Philip IV.* King of *Spain* upon his marriage.

We rode from *Nove* to *Genoa* 30 miles all over mountains. About 6 miles from *Nove* we paſſed through a handſome little walled town, called *Gavi*, where there is a ſtrong caſtle on a hill over the town; and about 6 miles further onward, another elegant and well built town called *Voltagio*. From hence we aſcended continually for about 7 or 8 miles till we came to the top of a very high hill, from whence we had a proſpect of *Genoa* and the ſea. Then we deſcended conſtantly till we came to the city. In all this way we met with and overtook mules and aſſes going to and returning from *Genoa*, to the number of 500 or 600 or more. Between *Gavi* and *Voltagio* we obſerved *Dens caninus* with a white flower; and all along on the mountains from *Gavi* to *Genoa*, *Stoechas citrina altera tenuifolia ſive Italica* J. B. as alſo *Phyllium majus ſemper virens*, & ſedi minoris ſpecies flore albo quadrifolio, now in flower. *Petaſites* flore albo on the ſide of a mountain about 6 miles from *Voltagio* in the way to *Genoa*. *Erica arboreſcens Monſpelienſis* flore purpureſcente ramulis ternis J. B. by the way ſides abundantly from

* i. e. Yellow ſtar of *Bethlehem*; Mr. *Johnson*, miniſter of *Brignel*, near *Græta* bridge in the north-riding of *Yorkſhire*, hath found this growing plentifully in the ſkirts of the woods thereabouts, and flowering together with the wood-anemony.

Gavi to Genoa. It is a stately plant, the tallest of this kind, arising to the stature and bigness of broom hereabout; near *Montpellier* it is less.

Mar. 20
Genoa.

We viewed *Genoa*, which for the building of it is certainly the most stately and, according to its epithet, superb city in all *Italy*. The houses are generally tall, scarce a mean house to be seen in town. The *New-street* answers the fame that goeth of it. It is but short, consisting only of 8 or 10 palaces, built of marble, very sumptuous and magnificent, the meanest of them (as *Cluverius* saith) being able to receive and lodge the greatest Prince and his retinue. The only deformity of this city is the narrowness of the streets unanswerable to the tallness of the houses, and yet they are made so on purpose, partly to save ground, which here is precious; and partly to keep off the scorching beams of the sun in summer-time, for the conveniency of walking cool; for which reason I have observed many of the ancient towns of *Italy* and *Gallia Narbonensis* to have their streets made very narrow. This city lies under the mountains exposed to the south, so that it needs must be very hot in summer, as witness the orange and olive-trees which grow so plentifully here, that they can afford those fruits at easy rates, and drive therewith a great trade, furnishing with oranges *Florence* and a good part of *Tuscany*, and sometimes sending them into *England*. It is built in form of a theatre, or crescent, encompassed with a double wall toward the land. The exterior or new wall of a great height and thickness passes over the top of mountains, and takes in a great deal of void ground.

The famous new mole, which now makes this a secure harbour, is said to have cost as much as the new wall: for a work of that nature I believe it is not to be parallel'd in the whole world. The manners of the inhabitants are not answerable to the beauty of their houses; they being noted among their own country men the *Italians* for proud, unfaithful, revengeful, uncivil to strangers, and horribly exacting. There goeth a proverbial saying of *Genoa*, that it hath, *montagne senza alberi, mare senza pesce, huomini senza fede, & donne senza vergogna*, that is, *Mountains without trees, a sea without fish, men without faith, and women without shame*. The number of the inhabitants must
needs

needs be great, they having lost in the last great plague (as we were credibly informed) to the number of 80000 souls. The chief trade of the town is silks and velvets; they make also pretty turned works of coral.

The government of it according to the new laws made by the Pope's legate, and the Emperor's and King of Spain's Ambassadors, not long after the time of *Andreas Doria*, is on this wise. There is 1. a *Duke*, who continues in office 2 years. 2. Two *Collegia*; one of *Governatori* (as they term them) the other of *Procuratori*. The *Governatori* 12, the *Procuratori* 8, all elected, besides those that of course come in for their livers. 3. A greater *Council* of 400. 4. A lesser *Council* of 100. 5. A *Seminary* for the 2 *Collegia* of 120. The 2 *Collegia* of *Governatori* and *Procuratori* are as it were the chief senate, or privy council or house of lords; and are chosen twice a year, viz. about the middle of *June*, and about the middle of *December*, after this manner. All the *Seminarium* of 120 have their names together with their surnames and fathers names written in little scrolls of parchment, and put into an iron box, which is kept very securely under many locks. When the time of election comes, this box is brought forth before the *Duke*, the 2 *Collegia*, and the lesser council. Then a boy, who must be under ten years of age, puts his hand into the box, and draws out 5 scrolls, which are read, and the 3 first, if they be capable, are *Governatori*, the 2 last *Procuratori*. If a man be 100 miles off the city he is incapable of being elected for that time. Likewise two of the same family cannot be *Procuratori* or *Governatori* together. Therefore if the two first that are drawn out or the two second be of the same family, the first is *Governator*, and the second *Procurator*: if the two last be of the same family, the first drawn out is a *Procurator*, and the second is returned into the box again, and the boy draws out another. So that every six months five are chosen into the *Collegia*, and five go out, and every one stays in office two years. In the *Collegium Procuratorum*, besides the 8, are all those who have been *Dukes*, and are gone out of office, who (*modò benè se gesserint*) continue *Procuratori* during their lives.

To supply or make up the *Seminarium* 120, every year in the stead of those who are dead, made incapable,

ble, or chosen into the two *Collegia*, the lesser council chooses a double number, all which must have three suffrages of five. And out of these the greater council choose half by the major vote.

For choosing the councils, both greater and lesser, the lesser council, in presence of the Duke and two *Collegia*, choose 30 *Electors* (all which must be of the nobility) by three suffrages of five. These 30 choose both the greater and lesser council, but the *lesser* out of the number of the *greater*, by a like proportion of suffrages. The greater council is assembled upon important occasions, and, with the Duke and two *Collegia*, makes the supreme power: the lesser council takes care of the lesser and ordinary concerns of the city and commonwealth. Those who are capable of being chosen into the greater council must be 25 years of age; only the 30 electors may, if they please, or see it expedient, choose to the number of 60 who are but 22 years old. Of the lesser council the one half must be thirty years of age, the others at least 27, excepting doctors of law and physick, who, if they be well qualified, may be chosen two years younger. Those who are capable of being chosen into the *Seminarium* must be 40 years of age.

The choice of the Duke is in this manner. The great council being assembled, there are put into an urn 10 golden balls marked with 10 several letters.

One of these, being drawn out, is shewn to the conservators of the laws, who thereupon put into another urn, standing by the Duke's throne, 50 golden balls mark'd with the same letter*, and 50 silver balls. These being shaken together, the lesser council of 100, excluding the two *Collegia*, draw out each man a ball. He that draws out a golden ball shews it to the *Censors*, who sit by, and presently writes in a scroll of paper the name of him whom he thinks fit to nominate for Duke, and goes out of the council. When all the golden balls

* This is done to prevent fraud, for if the golden balls were either not marked at all, or with any sign or letter known before-hand, any one of the council might bring such a ball with him, and, taking it in his hand, make shew as if he drew it out of the urn.

are drawn out, the two *Collegia* bring them into order, and count them over, and, if the number of the nominated amount to 20, then they are propounded to the greater council, who out of them, by major vote, choose 15. Out of these 15 the lesser council chuse six by three suffrages of five. Out of these six again by major vote the greater council choose the Duke. These suffrages are all occult, that is, given by putting of balls into balloting-boxes. If in the greater council for any person the negative and affirmative suffrages are equal, then five by lot are to be put out of the council, and the rest to ballot again. Many other provisions there are in case of equality or disagreement, &c. Nothing can be propounded in council but by the Duke, who, during the time of his regency, lives in the palace, and hath (according to *Sanfovinus*) a guard of 500 *Switzers*.

The office of *St. George* is (as far as I understand it) nothing but a company of bankers, which lend money to the common-wealth, for which they are allowed so much *per Cent*, and have assign'd to them the publick gabels and other revenues; and, for their further security, have also the island of *Corfica* engaged to them. This company choose yearly out of their own number eight protectors, who are to take care of and manage the affairs of all the creditors. Into this bank strangers usually put in money, and so become of the company, for which they receive yearly interest, proportionable to the improvement made of the whole stock of monies then in bank.

The publick revenue of this state is said by some to be 120,000 crowns *per Annum*, and yet scarce sufficient to defray the publick expences.

There are many private citizens here very rich. The republick is thought to be able to raise an army of 30,000 men, and to set out to sea 12 gallies and 20 ships of war. They hold good correspondence with all christian Princes and States, excepting the Duke of *Savoy*, by reason of his pretence to the city of *Savona*.

Upon the cliffs about the *Pharos*, or watch-tower, and near it we found these plants: *Trifolium bituminosum* Ger. *Jacobæa marina* Ger. *Conyza major* *Monspeliensis odorata* J. B. *Alaternus*; *Carduus galactites* J. B. *Thymum*

Geranium vulgare rigidius folio cinereo J. B. *Geranium folio Althææ* C. B. *Thlaspi Alysson dictum maritimum* C. B. *Lotus Libyca Dalechampii*; *Lotus Pentaphyllos siliquosus villosus* C. B. *Smilax aspera*; *Adiantum five Capillus veneris* J. B. *Hyoscyamus albus* Park: *Hæc species quàm in muris & rupibus circa Genuam frequentem vidimus, folia habet breviora, viridiora, rotundiora, minùs laciniata quam vulgaris niger*; *florem minorem, in nonnullis totum luteum, in aliis plantis fundo obscure purpureo.* On the walls we observed stock-july-flowers growing plentifully, whether springing spontaneously, or of seed casually scatter'd out of gardens we cannot determine; likewise *Globularia Monspeliensum*, and *Genista Hispanica* on the rocks eastward of the city. Upon the shores we found cast up great plenty of the *ballæ marinæ* sea-balls, which are little round lumps (some of them as big as tennis-balls) of *Festucæ* amassed together, which we supposed to be cast out of fishes stomachs.

April 2.
Luca.

Massa,

We went in a *Feluca* from Genoa to *Porto Venere*, and thence cross the bay of *Spezzia* to *Lerici*, where we took post horses, and rode that night to *Massa*, passing through *Sarzana*, a strong town belonging to the *Genoese*, and a frontier. *Massa* is but a small city, yet hath it a Prince of its own, who is lord also of *Carrara*, whose chief revenues arise from the marble quarries. The Prince is by birth a *Genoese*, of the family of *Cybo*. Over the town gate we observed this inscription, *Albericus Cybo Malaspina Sacri Romani imperii, civitatisque Massæ princeps.*

3.

Pietra
Santa.

We rode on to *Luca* in a valley by the foot of hills over a great deal of moorish and boggy ground, thro' a country not well inhabited. We passed through *Pietra Santa*, a town belonging to the Duke of *Florence*, but utterly disjoin'd from the rest of his state by the interposition of the territory of *Luca*. In this journey I observed the following plants. *Scrophularia Urticæ folio* C. B. which I found also plentifully upon the walls of *Pisa*. *Orchis macrophylla* Col. between *Massa* and *Sarzana*. *Moly parvum caule triangulo* ibid. *Narcissus medioluteus polyanthos* Ger. among the corn plentifully all along as we rode, now in the flower. On the sides of the mountains between *Massa* and *Luca*, *Antirrhinum luteo*
flore

flor. C. B. *Tithymalus dendroides* J. B. *Lentiscus*; *Anagyris* five *Laburnum*; *Colutea vesicaria*, *Colutea scorpioides*; *Ruta sylvestris* maj. J. B. *Laurus vulgaris*; *Tencrium*: On ditch banks and in shadow places by the way side, *Arisarum latifolium* Clus. and *Aristolochia longa*. A sort of *Dentaria aphyllis* with a purple flower, covering the ground with a thick tuft almost after the manner of *Housleek*, having scarce any stalk.

Lychnis surrecta folio angustissimo, flor. rubello, among flax. *Ornithogalum vulgare* Ger. among the corn plentifully. *Cyclamen vernum*, good store among shrubs upon the hills sides, now in flower. *Myrtus minor vulgaris*; *Philyrrea angustifolia*; *Philyrrea* 3 Clus. *Genista Hispanica* Ger. Upon the descent of the mountains, four miles distant from *Luca*, *Hesperis sylvestris latifolia flor. albo parvo* Park. A kind of *Alfina hirsuta myosotis* with a very large flower. A shrub like to *Guaiacum Patavinum*, if not the same. A kind of *Thlaspi monospermum* with a white flower; *Sedum minus semine stellato*; an *Sedum echinatum flor. luteo* J. B. in rupibus & aggeribus sepium. *Alfina foliis hederaceis Rutæ modo divisis* Lob. *Anemone tuberosa radice* Ger. now in flower. Near *Porto Venere*, *Alfina folio crasso*.

Luca is no great city, *Sansovinus* saith 2 miles round, (but I take it to be three or more) yet is it very populous, containing within its walls in *Sansovinus's* time about 34000 persons; which number I believe is now much increased by reason of the freedom and ease the subjects enjoy under this government above their neighbours of *Tuscany*. It is situate in a pleasant valley, well fortified, the walls and bulwarks both very strong and in good repair; the mounts and platforms stored with great guns; several half moons of earth without the walls: the walls themselves planted with rows of trees, and we permitted to walk them without scruple or question. The buildings of the city good; the churches though not great, yet as well kept and handsomely adorned within side as a man shall see any: the streets cleanly and well paved; in a word, all things both within and without the city very trim and polite. Both citizens and countrymen are very courteous and well manner'd, and seem both by their habit and address, and the cheerfulness of their looks, to live

live more freely and in better condition, and to have more spirit and courage then the other people of *Italy*. That they live more freely and in better circumstances than their neighbours, themselves are sensible, and there-upon so well affected to their governors, and studious to maintain their liberty, that upon giving them a token by making a fire upon one of the towers all the countrymen run presently to the city, so that in 2 or 3 hours time they can have ready 30000 men in arms: and withal they are so courageous and stout, that they seem to have no fear at all of the Duke of *Tuscany* their potent neighbour, but told us, that, if their governors would lead them, they would not fear to march up to the very gates of *Florence*.

That liberty doth naturally beget courage and valour, and on the contrary, slavery and oppression break and debase mens spirits, is so clear in experience, that I need not go about to prove it. And yet were it not so, it is no wonder that men, who find themselves well at ease, and have something to lose, or are at least in a capacity of growing rich, if not already so, should be very loth to change their condition for a worse, and stoutly defend themselves against any that should endeavour to bring them under the yoke; whereas those that are oppressed and aggrieved having nothing to lose, and being already in as bad a condition as they are like to be under any other government, must needs have little heart to fight for their Princes, and be indifferent which way things go.

The women are not so strictly guarded and confined as in other cities of *Italy*, but walk up and down more freely. They are many of them handsome and well favoured, and, notwithstanding their liberty, I think more modest than their neighbours: in their habit and attire they imitate somewhat the *French* fashions.

This city is very vigilant and careful to preserve its liberty: tho' they have three gates, they permit strangers to enter in and go out only at one, that so they may more easily know what number are in the city, for fear of a surprise. They permit none to walk about the streets so much as with a sword, unless he have licence from the *Antiani*.

The

The government is by a great council of 160, annually chosen out of the nobility (the commons having no interest or share therein) who must be all at least twenty-five years old, nine *Antiani* and a *Gonfaloniere*. The *Antiani* and *Gonfaloniere* are chosen a-new every two months. These are called the *Signoria*, and must live in the palace during the time of their office and authority.

They have a guard of *Switzers* in the palace of about 80. The *Gonfaloniere* is the supreme officer, yet hath little advantage above the rest more than his title and precedency; and we were told, that during his office he is exempted from all taxes and gabels, which the noblemen pay equally with the commons. The city is divided into three parts called *Terzieri*, each *Terziero* hath its arms or banner called *Gonfalone*; whence the name *Gonfaloniere*. At the corners of each street are painted both the arms and name of the *Terziero*, and the bulwark they are to defend. Out of each *Terziero* are chosen by the council three *Antiani*.

The publick revenue is thought to be 100,000 crowns *per Ann.* The olives that grow in this territory are reputed the best in all *Italy*.



O F

P I S A.

P I S A was formerly, so long as it continued, a free-state or common-wealth, a rich, populous, potent, and flourishing city; but since it hath come under the *Florentine* yoke, it is become poor, weak, and almost desolate, notwithstanding all the endeavours the Dukes of *Tuscany* have used to invite and draw people thither, by founding an university, setting up an order of knight-hood, and building an exchange for merchants there. It is situate upon the river *Arnus* in a fenny level; so that the air must needs be bad and unwholsome for such as are not born there. The most remarkable things we took notice of in this city were 1. The church of the knights of St. *Stephen*, an order founded by *Cosmus*, the first great Duke of *Tuscany*. 2. The house of *Bartolus*, now made a college for students in law and philosophy, and thereon this inscription, *Ferdinandus Medices magnus Dux Etr. III. has ædes quas olim Bartolus Juris interpres celeberr. incoluit nunc renovatas & instructas adolescentibus qui ad Philosophorum & Juris consultorum Scholas missi publico urbium atque oppidorum suorum sumptu separatim alebantur, publicæ utilitati consulens addixit, legesque quibus in viætu, vestitu vitæque simul degendâ uterentur tulit, Anno salutis MDLXXXV.* 3. The *domo* or cathedral church, a sumptuous building of marble, having all the doors of brass curiously engraven; a double isle on each side the *nave*, and two rows of marble pillars, adorned with stately altars and rare pictures; the walls are hung round about with red velvet; the roof richly gilded. On each side the high altar is a picture, and under it an inscription explaining the history of it; which, because they contain

contain two of the notablest adventures and successes of this city, I thought it might not be amiss here to insert.

Templum hoc ut auctæ potentie ac religionis insigne monumentum posteris extaret, Pisani ex Saracenorum spoliis captâ Panormo ædificatum ac Sanctorum reliquiis è Palæstina usque advectis auctum Gelasius II. P. M. solenni pompa consecravit, A. D. MCXIX.

II.

Pascale II. P. M. autore, Pisani classe 300 triremium Petro Arch. Pis. duce Baleares insulas profigatis Saracenis in ditionem redigunt, Christianoque nomini adjungunt, captâque regia conjuge ac filio præclaram victoriam illustri pioque triumpho exornarunt. A. D. 1115.

4. The *Baptisterium*, having in the middle a large marble font like the cistern of a fountain, with water continually running into it. There is also a marble pulpit curiously carved. 5. The burying place, called the *Campo Santo*, because made of earth brought out of the Holy Land. The earth is said to consume a body in forty-eight hours: it is an oblong square, encompassed with a broad portico, paved with grave-stones, and the walls painted. 6. The *Campanile*, or steeple, a large round tower of a considerable height, so very much inclining, or seeming to incline or lean to one side, that one would think it could not long stand upright, but must needs fall that way. I suppose it was on purpose built so at first, one side being made perpendicular, and the other inclining, to deceive the sight, tho' some say it sank after it was built, and doth really incline. 7. The *aqueduct*, of above 5000 arches, begun by *Cosmus*, and finished by *Ferdinand I.* Great Dukes of *Tuscany*, bringing water to the city from the mountains about five miles distant. This water is so good, that it is carried in flasks as far as *Leghorn* to sell. 8. The *physick-garden*, at our being there but meanly stored with simples.

Leghorn.

From *Pisa* we went by boat to *Leghorn* [*Livorno*] called anciently *Portus Liburnus*, some ten or twelve miles distant. This town is not large, and but low built, yet very pleasant and uniform, having streight streets, and a spacious *piazza* in the middle. It stands in an open level, without mountain or hillock within five miles of it on any side. It is well fortified with walls and bastions, and a deep trench round, except on the sea-side; and secured with a good garrison, being one of the most considerable and important places in all *Tuscany*. Since the Great Duke made it a free port, it hath increased mightily in trading and riches, great numbers of merchants from all nations resorting hither, and most of the bargains for the commodities of the whole *Levant* being here driven. The greatest part of the inhabitants are strangers and *Jews*, which last are esteemed one third of the whole number of people, and thought to amount to 5000 persons and upward. Before these privileges granted to *Leghorn*, when it was thin of inhabitants, it was accounted a very bad air, and an unhealthful place, by reason of the fens and marshes adjoining: but now, since it is become populous, the multitude of fires (as is supposed) hath so corrected the air, that people enjoy their health as well, and live as long here, as in any other town or city of *Italy*.

Near the haven is a very magnificent statue of *Ferdinand I.* Great Duke, about the pedestal whereof are four brass statues of slaves chained, of a gigantick bulk and stature. The haven within the mole is but small, but here is good riding for ships without. The Great Duke in *Lent* time uses to make his residence in this town; here being great variety of good fish taken in the sea near hand, and to be sold at reasonable rates; all other provisions being dear enough. In *Leghorn* we saw workmen filing of marking-stones, called in *Latin* *Lapis galactites* & *morochthus*, in *Italian* *Pietra lattaria*; which they told us were found at *Monte negro* and thereabout, some five miles distant from *Leghorn*, and from hence transported into *France*, *Spain*, *England*, the *Low-Countries*, &c. Of the dust and filings of this stone they

they make the body of powder for hair, as the workmen informed us.

* Of plants we observed about Leghorn, *Kali geniculatum majus*, in the marshes by the sea-side: *Absinthium Seriphium Gallicum*; *Polium montanum album* C. B. *Medica doliata spinosa*; *Medica cochleata spinosa*; *Med. marina*, on the sands; *Caltha arvensis* C. B. *Hyacinthus palustris vernus*, *flosculis fimbriatis albis*; *Hyacinthus comosus* Ger. *Lathyrus flore coccineo*; *Vicia luteo flore sylvestris*; *Ochrus sive ervilia* Dod. these three last among the corn; as also *Gladiolus Narbonensis* Lob. *Telephium scorpioides* Anguill. in arenosis: *Phyteuma Monspeliensium*; *Cichorium pratense vesicarium* Col. *Medica Scutellata* J. B. *Iris humilis violacea latifolia*, & eadem flore albo, in rupibus ad mare: *Herniaria hirsuta*; *Allii species*, an *Ampeloprasum*? *Ferrum equinum* Lob. *Orchis macrophyllus* Columnæ; *Trifolium fragiferum sive vesicarium*, floribus nigris rubellis, flosculis velut in umbella parva dispositis; *Chrysanthemum Bellidis folio* Hort. Pat. inter segetes: *Bupthalmum Cotulæ folio* C. B. an *Chrysanthem. Valentini* Clusii? *Anthyllis leguminosa* flo. purpureo. *Cruciata minima muralis* Col. *Peplus minor* J. B. *Ageratum sive Balsamita mas*: a sort of *Draba* with a white flower; *Hieracium perfoliatum*; besides many which we had found in other places, as that sort of *Dorycnium* which J. Bauhinus calls *Trifolium album rectum hirsutum valde*; *Carduus Chrysanthemus Narbonensis*, which Lobel calls *Eryngium luteum Monspeliensium*; *Heliotropium majus*; *Carduus solstitialis* Ger. *Cichorium pratense verrucarium*, in arvis passim; *Blattaria flore luteo*; *Convolvulus minimus spicifolius* Lob. *Melissa sylvest. hirsutior*, minus odorata; *Dorycnio congener* planta: *Rapistrum monospermon*; *Ammi vulgare*; *Passerina Tragi*; *Sideritis vulgaris*; *Aster luteus foliis ad florem rigidis*; *Stoebe major caliculis non splendentibus*. Between Pisa and Leghorn we noted *Leucium bulbosum majus polyanthemum* Ger. in the marshes near Pisa plentifully; *Aristolochia clematitis*; *Aster conyzoides* nobis dictus; *Asparagus altilis*: *Gramen supinum aculeatum* J. B. Besides these, we observed some which grow wild in England, but more rarely, as *Leucium marinum majus folio sinuato*; *Orchis fluciflora galea* &

* Plants observed about Leghorn.

alis herbidis: Hyacinthus stellaris vernus minor; Eranthemum sive flos Adonis; Trifolium pumilum supinum flosculis longis albis P. B. Ferrum equinum Germanicum siliquis in summitate C. B.

At Leghorn finding a good Dutch vessel ready to set sail for Naples, we put ourselves aboard her: the wind not favouring us, we spent five days in this passage before we reached our port. The captain of the ship told us that hereabouts, usually in the forenoon, the wind blows from the land, and, in the afternoon, from the sea; so that it is easterly in the forenoon, and westerly in the afternoon. We also observed in this voyage, that about sun-set the wind fell; so that soon after sun-set there was little or no wind stirring: and likewise several days about sun-rising we had but little wind. In our return backwards from Messina to Naples, and from Naples to Leghorn, we observed that the wind, for the most part, sat contrary to us. And the seamen told us, that this was general in summer time. So that you have a much quicker passage from Leghorn to Naples, and thence to Messina, than backwards. We observed also that the wind follows the sun, so that every morning we could make some use of the wind to sail with, but in the afternoon none at all; which agrees exactly with our captain's observation, the land lying eastward, and the sea west. Our captain also told us that, when they made a voyage from Holland to the West-Indies, they sailed down the coast of Africa as far southward, as the place in the West-Indies whither they intended to go lay, and then steer'd directly westward; both the wind blowing constantly from the east, and the sea also running the same way. Which relation of his concurring with the general vogue of mariners, if true, doth much confirm the opinion of the diurnal motion of the earth. When they return backwards from thence into Holland, they go round about the bay of Mexico, and up a good way northward, and then strike over to Europe, the water being reflected, as he said, that way, and the wind also often blowing that way.

Naples.

Naples lies by the sea-side under hills, in form of a theatre; for its figure and situation much like to Genoa, but

but somewhat bigger, and much more populous; so that before the last great plague (which swept away, as we were credibly informed, at least 120000 souls) one might well reckon the number of inhabitants to have been about three hundred thousand. The circuit of the walls is not above seven *Italian* miles, but it hath large suburbs. The town is well built of stone, the houses tall and massy; for the most part flat roofed, and covered with a kind of plaster, which fences out the rain, and endures the weather well. Notwithstanding this city lies so far south, and under hills, yet is not the heat extreme, but such as may well be endured, even in the middle of summer, they having for the most part, about noon-tide, a breeze of wind, which cools and refreshes much. Two or three hot days we had, but the rest temperate enough. They told us, that there uses to be very little rain there in summer-time, howbeit at our being there (which was in the latter end of *June*, and beginning of *July*) it rained every other day, and sometimes so plentifully, that the water ran down like a river in the streets. When they have no rain, to cool the streets in the afternoon, they draw about a tun filled with cold water, and bored with several holes, whence the water gushes out as it goes along. The dialect of the common people is much different from the *Tuscan*, and not to be understood but by one who hath a long time conversed with them. This city is well served with all provisions, especially fruit, which is very cheap here. In this place we took first notice of the *Cucurbita anguina*, *Cucumis anguinus*, *Mala insana*, & *Limoncelle*, to be sold in market. *Macaroons* and *Vermicelli* (which are nothing but a kind of paste cut into the figure of worms or thongs) boil'd in broth or water, are a great dish here as well as at *Messina*, and as much esteemed by the vulgar, as frumenty by the country people in *England*. All the *Neapolitans* and *Sicilians*, and generally the *Italians*, drink their wine and water snowed; and you shall see many stalls in the streets where there is snowed water to be sold: many also you shall meet, with a barrel at their backs, and glasses in their hands, crying

* *Acqua ghiacciata*, or *Acqua nevata*. We were credibly informed that before the last great plague the very gabel upon snow was farmed at 25000 crowns *per annum*.

NB. To cool the water or wine they do not put the snow into it, but round about the vessel wherein it is contained: so they have a vessel containing the snow or ice, and into that they set the vessel containing the wine or water.

There are in this city an incredible number of monasteries or religious houses (as they call them.) *Beltrano Descript. Neap.* gives us a catalogue of 160 of all sorts, whereof 121 of men and 39 of women; the number of the persons contained in them being 12421.

Four castles there are to secure and bridle the city withal, 1. *Castel d'Ovo*, built on a rock in the sea, having an artificial causey or mole leading to it from the shore. 2. *Castel S. Elmo* or *S. Hermo* standing on a hill above the city. 3. *Castel novo* by the water-side, near the haven where the gallies lie. 4. *Torrione di Carmine*, made use of by *Massaniello* and *Anese* in the time of the rebellion. This is only a tower belonging to the *Carmelites* cloister.

The churches in this town are generally very handsome within side; many of them richly gilt and sumptuously adorned; some of them not only paved with marble of divers colours, but their walls incrust'd all over with marble inlaid. Of all the cloisters I have any where seen that of the *Carthusians*, close adjoining to the castle *S. Elmo*, is the most splendid and magnificent, where there is a large square court compass'd about with the fairest *peristylum* or cloister that I ever saw: all the pillars and all the pavement (of the portico I mean) being of marble of several colours well wrought, polish'd, and laid, and so cleanly and elegantly kept, that one cannot see a more pleasant spectacle of this nature. For my own part I was much taken with the sight of it. Here is a fair arsenal to build gallies in, now made but little use of. The publick granary deserves notice taking, it being the greatest and best furnished of any we have seen. They told us there was corn enough always in store to serve the whole

* i. e. Snowed water or iced water.

city some years upon any exigency. There are great vaults made under ground to keep it in winter time, and large rooms above to keep it in summer. A great number of men they hire to turn all the beds of corn every day. The bakers of the town are obliged to take every month 25000 * *tomoli* out of this granary, that so there may be a succession of new corn yearly. This they paying a good rate for, is the reason why bread is dearer in Naples than otherwise it would be.

In the city of Naples are 5 Seggi, that is, benches or companies of noblemen, viz. that of 1. Capua. 2. Nido. 3. Montagna. 4. Porta. 5. Porta nuova. In the whole kingdom of Naples there are 148 cities, of which 21 [20] are archbishopricks, and 127 [128] bishopricks: to about 30 of which the King of Spain nominates: 87 Princes; 122 dukes; 159 marquesses, and 7 earls. The kingdom is divided into 12 provinces, viz. 1. TERRA DI LAVORO anciently called *Campania felix*, in which are 14 cities, viz. 1. Aversa. 2. Capua. 3. Calerta. 4. Gaeta. 5. Ischia. 6. Massa-Lubrense. 7. Nola. 8. Pozzuoli. 9. Sessa. 10. Sorrento. 11. Teano. 12. Traetto. 13. Venafro. 14. Vico Equense. 2. PRINCIPATO CITRA, in which are 18 cities, 1. Amalfi. 2. Campagna. 3. Capri in the island *Caprea* near Naples famous for the retirement of the of *Tiberius Caesar*. The greatest part of the revenue of the bishop of this island they told us arises from the quails taken therein. 4. Casella. 5. Conturfi. 6. Eboli. 7. Cappaccia. 8. Gragnano. 9. Lettere. 10. Laurino. 11. Nocera. 12. Salerno. 13. San-severino. 14. Saponara. 15. Sarno. 16. Scala. 17. Tramonti. 18. Ravello. 3. PRINCIPATO ULTRA, in which are 14, viz. 1. Beneveno. 2. Solofra. 3. Consa. 4. Ariano. 5. Avellino. 6. Bisaccio. 7. S. Angelo de Lombardi. 8. Cedogna. 9. Monte marano. 10. Nusco. 11. Voltorara. 12. Vico. 13. Vico della Baronina. 14. S. Agatha delli grotti. 4. BASILICATA, which hath 11 cities, viz. 1. Lavello. 2. Amalfi. 3. Policastro. 4. Venosa. 5. Acirenea. 6. Muro. 7. Monte peloso. 8. Potenza. 9. Rapolla. 10. Tricarico. 11. Turfi. 5. CA-

* A *tomolo* is a measure bigger than an *English* bushel.

LABRIA CITRA, in which are 12. viz. 1. Mantea. 2. Cosenza. 3. Paola. 4. Montalto. 5. Rossano. 6. Bisignano. 7. Cariari. 8. Cassano. 9. Martirano. 10. Strongoli. 11. S. Marco. 12. Ubriatico. 6. CALABRIA ULTRA 16. viz. 1. Catanzara. 2. Crotona. 3. Squilaci. 4. Taverna. 5. Tropic. 6. Rhezo, or Reggio, antiently *Rhegium*. 7. Belicastro. 8. Bova. 9. S. Severina. 10. Gieraci. 11. L'isola. 12. Montilene. 13. Melito. 14. Nicastro. 15. Nicoterra. 16. Oppido. 7. TERRA D'OTRANTO 14. viz. 1. Gallipoli. 2. Lecce. 3. Brindisi. 4. Matera. 5. Ostuni. 6. Tarento. 7. Otranto, *Hydruntum*. 8. Alessano. 9. Castellaneta. 10. Castro. 11. Motola. 12. Nardo. 13. Oria. 14. Ugento. 8. TERRA DI BARI, 16. 1. Andria. 2. Bari. 3. Barletta, a very strong hold. 4. Bitonto. 5. Terra di Mola. 6. Molfetta. 7. Monopoli. 8. Trani. 9. Giovenazzo. 10. Biseglia. 11. Bitetto. 12. Conversano. 13. Gravina. 14. Monoruino. 15. Polignano or Putignano. 16. Ruvo. 9. ABRUZZO CITRA 5. viz. 1. Chieti. 2. Sulmona. 3. Benevento. 4. Borrelle. 5. Ortona. 10. ABRUZZO ULTRA 5. 1. Aquila. 2. Atri. 3. Campi. 4. Civita di Penna. 5. Teramo. 11. CONTADO DI MOLISI 4. 1. Boiano guardia. 2. Alferes. 3. Isernia. 4. Trivento. 12. CAPITANATA 13. viz. 1. Monte S. Angelo. 2. Ascoli. 3. Bovino. 4. Ferensuola. 5. Larino. 6. Lucera. 7. Lefina. 8. Salpe. 9. Vieste. 10. Volturara. 11. Termole. 12. Sancto Severo. 13. Manfredonia: in all about 151. But many of these are pitiful poor desolate places, inferior to the better sort of our *English* villages.

Every hearth (fires they call them) in this kingdom of *Naples* pays fifteen carolines the year to the King, which is about six and six pence or seven shillings *English*. The number of fires in the whole kingdom is 475727, besides 5804 which are exempt from payment. In which number are not comprehended the fires of the *Albanese* and *Illyrians* commonly called *Sclavonians* who pay no more than eleven carolines the year, are numbered every year, and are permitted to remove from place to place in the kingdom. The number of these extraordinary fires is 4451. So then the whole sum of the hearth-money is 719095 ducats four carolines, from which deducting what is to be abated for places privileged and exempt from payment,

payment, that which comes clear into the King's treasury will be 654873 ducats, and six carolines.

The *Adogo*, or tax which feudatories pay to the King in lieu of personal service, amounts in the whole kingdom to 120568 ducats: they also pay reliefs after death one half of a year's revenue. Besides these there are abundance more taxes and gabels paid by the subject; an account of all which in particular may be seen in *Scipio Mazzella's* Description of the Kingdom of *Naples*, written in *Italian* and printed 1601. So that one would think it were impossible for poor peasants to pick up so much money as they pay to the King only: and yet I believe the gabels and payments are since that time much increased. The whole sum of all the King's *Entrata* or revenue yearly accruing from this kingdom then was 2996937 ducats, 3 carolines, and 14 grains.

While we staid in this city we were present at the meeting of the *Virtuosi* or philosophic academy, which is held weekly on *Wednesdays* in the palace of that most civil and obliging, noble and virtuous person, the marquis *D' Arena*. There were of the academy but 15 or 16 admitted, but at the meeting were present at least threescore. First there was shewed the experiment of the water's ascending above its level in slender tubes, upon which when they had discoursed a while, three of the society recited discourses they had studied and composed about particular subjects, which were appointed them to consider the week before: and after some objections against what was delivered and reasonings to and fro about it, the company was dismiss'd. A man could scarce hope to find such a knot of ingenious persons and of that latitude and freedom of judgment in so remote a part of *Europe*, and in the communion of such a church. They are well acquainted with writings of all the learned and ingenious men of the immediately preceding age, as *Galileo*, *Cartes*, *Gassendus*, *Harvey*, *Verulam*; and of the present yet surviving, as *Mr. Boyle*, *Sir George Ent*, *Dr. Gliffin*, *Dr. Willis*, *Dr. Wharton*, *Mr. Hobbs*, *Mr. Hook*, *Monsieur Pecquet*, &c. We were very much pleased and satisfied with the conversation and discourse of some of them. Amongst the rest *Dr. Thomas Cornelius* hath made himself known to the world by his writings.

We

April 24. We went by water to *Pozzuolo* anciently *Puteoli*; there *Pozzuolo*. so soon as we were come into our inn many seamen and country people came about us, some bringing shells, others *Hippocampi* dried, others ancient medals and *Entaglie*, others pieces of coloured glass raked out of the sea, (as they told us) about *Argenteria*. Near this town are several arches of stone [13 peers] reaching a great way into the sea. Some are of opinion that this was the beginning of *Caligula's* bridge over this bay, and that from the end of this pile as far as *Baia* the rest of the bridge was made of vessels, locked together and fastened with anchors on each side. But more probable it is that this was intended for a mole or peer to secure the harbour, and for ships to lie behind, because upon every peer a great stone perforated stands jetting out to tie vessels unto. That it was an ancient *Roman* work the manner of the arches, the figure of the bricks, and the stateliness of it do sufficiently argue.

From *Pozzuolo* we passed over the gulf to *Baia*, where are so many antiquities, that to discourse fully of them would require a volume alone. And others having written at large of them both in *English* and *Latin*, I shall not so much as mention any thing save only the sweating vault being one of the grots called the * *Bagne de Tritoli*. It is a long and narrow passage like the entry into some room, the upper part whereof is so hot, that a man cannot endure to walk upright, being then in danger to be stifled by the hot and suffocating vapour with which the upper part of the vault is filled: the lower part though not cold is yet tolerable. Indeed one would not think there could be so great a difference in so small a distance. He therefore that goes in there is necessitated to stoop low; for if you do but hold up your hand it sweats suddenly. We observed that of the lower part of this vault where it was cool the sides were a firm stone, but of the upper part where it was hot, a soft, friable, yet unctuous yellow clay. It seemed to us to have a mixture of sulphur and fixed salt deliquated in it, but we made no trial of it by fire or otherwise. Where this *stratum* or region of clay begins there precisely doth the heat begin; so that where the

* The baths of *Tritoli*.

region of clay goes lower there you must stoop lower to avoid the heat. In this hot steam there is a watery vapour contained, as appears by the drops notwithstanding all the heat condensed on the sides of the vault as on an alembick head.

As we returned we viewed the new mountain, called by some * *Monte di cenere*, raised by an earthquake, September 29. 1538, of about an hundred foot perpendicular altitude; though others make it much higher, according to *Stephanus Pighius* it is a mile ascent to the top, and four miles round at the foot. We judg'd it nothing near so great. The people say it bears nothing; nothing of any use or profit, I suppose they mean, else I am sure there grows *heath*, *myrtle*, *massich-tree*, and other shrubs upon it. It is a spongy kind of earth, and makes a great sound under a man's feet that stamps upon it.

The same earthquake threw up so much earth, stones, and ashes, as quite filled up the *Lacus Lucrinus*, so that there is nothing now left of it but a fenny meadow.

In our return from *Pozzuolo* we viewed the mountain called *Solfatara* anciently *Campi Phlegrei*, which continually burns. On the top of the mountain is a large excavated oval place like an amphitheatre, in length 1500 foot, in breadth 1000; where the burning is. There are several holes or vents where the smoke issues out, as out of a furnace. We gather'd perfect flowers of sulphur to appearance, and salt-armoniack sticking to the mouths of these vents. If you thrust a sword, or any iron instrument, into one of the holes where the smoke comes out, and suddenly draw it back again, you shall see it all over bedewed or thick set with drops of water. Whence it is manifest that this smoke is not only a dry exhalation, but hath also a good quantity of the vapour of water mix'd with it. We observed that these *flours* of sulphur would not burn, nor easily melt over the fire, by reason of the admixture of some heterogeneous body with them. The stones and earth of this mountain are crusted over with these flowers of brimstone, which they gather and distil brimstone out

* i. e. The mountain of ashes, or cinders.

of. As one walks here, the earth makes a noise as if it were hollow underneath; and one may perfectly hear, as it were, the hissing and boiling of some melted mineral, metal, or other liquor, just under one's feet. One that should see this smoke, hear this noise, and feel the heat, would wonder that the mountain should not suddenly break out into a flame. This great hollow above was, I suppose, excavated partly by force of the burning, the earth sinking down, and partly by paring away the top to distil for brimstone.

Vesuvius. Five miles distant from *Naples* is the mountain *Vesuvius*, so famous in all ages for its burning. The ground all about the sides of it we found cover'd with cinders and pumice-stones, which had been cast out in the time of the burnings. We observed also great channels, like gulls made by sudden torrents and land-floods, which they told us were made by water thrown out at the top of the mountain in the conflagrations. Toward the top grew very few plants. *Acetosa ovilla* where nothing else was to be seen. A little lower grew *Colutea Scirpioides*, and some shrubs of *poplar*. Near the top the ascent was steep, and very toilsome to get up. Upon the very top is a great pit or hollow in form of an amphitheatre, of about a mile round, caused by the fire's blowing up the upper part of the mountain several times with great violence. There are still about the bottom of this great cavity some small *spiracula* of smoke, but inconsiderable, and which seem'd not to threaten any future eruption.

The Grot- We viewed the cave call'd *Grotta di cane*, near the
ta di cane. *Lago Agnano.* This grot is narrow and short. Whatever others have written or said to the contrary, a man may, without any great prejudice, go into and continue in it a long time, even in the further end of it, as some of us did above an hour's space. The venenose vapour (whether it be purely sulphureous, or also arsenical) ascends not a foot from the ground; but so high as it ascends one feels his feet and legs hot. If you hold your head down near the ground where the vapour is, you shall presently find a fierce sulphureous twinge in your nose, just as if you held your head over burning brimstone, or more violent, which makes a man stagger at first stroke, and stifles before one be aware. We carried

with

with us a dog, which, by holding his nose down, we almost kill'd suddenly; and then throwing him into the lake, to try whether that would recover him (as is generally believ'd) the dog being not lively enough to swim was there drowned. I believe if we had left him in the air he would have recover'd. We then put in a pullet, which was mortified immediately; next a frog, which held not out long; and last of all a serpent, which lived about half an hour. The steam, if you hold a candle where it comes, presently puts it out. I believe this vapour arises not only in this grot precisely, but also all hereabout, as I am confident would be found, were there other grots dug out of the hill near it.

† Going to this grot, we passed through the vault or artificial high-way wherewith the mountain *Pausilypus* is perforated, made by one *Cocceius* in 15 days. It is said to be a mile in length, but we judged it not above half an *English* mile. It is highest at each end, and lowest in the middle, and yet there about 12 foot high; broad enough for two carts meeting to pass one another. About the middle of the vault it is so dark (no light now coming in but at the ends) that those who meet cannot see one another; and therefore, lest they should jumble, or fall foul one upon another, they that go toward the sea cry *Alla marina*, and they which go into the country cry *Alla montagna*; so each take their left hand, and pass commodiously. The ports may be seen from end to end, and any where in the mid-way; but in cloudy weather it is so dark in the middle that a man can scarce see his hands held up to the light. This road is much frequented; though the bottom be stone, yet is it very dusty. Near the end toward *Naples* we saw a window at the top. They that write of this grot mention two windows made by *Alphonsus* I. King of *Naples*; but we saw only this, which doth yield but little light.

* The plants, we took more especial notice of about *Naples*, were these, *Trifolium corniculatum incanum maritimum majus*; *Lotus filiquis Ornithopodii*; *Medica orbi-*

† The grot or hole through mount *Pausilypus*.

* Plants observed about *Naples*.

culata

culata minor; *Medica dolata spinosa*; *Facea purpurea maritima capitulo spinoso Neapolitana*; *Rhamnus primus Clus.* *Stoechas citrina altera tenuifolia sive Italica J. B.* *Linaria odorata Monspeffulana*; *Medica marina*; In litibus arenosis passim. On the rocks about Baiæ, *Puteoli*, &c. *Cytisus incanus, siliquis falcatis*; *Acanthus sativus*; *Laurus Tinus cærulea baccæ*; *Acacia altera trifolia Ger.* *Gnaphalium maritimum*; *Sonchus Creticus foliis laciniatis C. B.* *Chrysanthemi Cretici duæ aut tres differentiæ*; *Faba Veterum serratis foliis Park.* *Moly parvum caule triangulo*; *Centaurium luteum novum Col.* *Cerinthe minor flore luteo*; *Lychnis sylvestris hirta Lob.* *Lychnis montana viscosa alba latifolia C. B.* *Gramen tremulum maximum*; *Lagopus maximus Ger.* On the mountain *Vesuvius*, or near to it, *Helianthemum flore maculoso Col.* *Trifolium stellatum C. B.* *Vicia seu Lathyrus gramineo folio, flore coccineo*; *Colutea scorpioides*; *Lotus arbor*; *Arbutus*; *Linaria graminea floribus congestis purpureis*; *Linaria purpurea magna J. B.* *Genista Hispanica*. As you go up from the city to the cloister of the *Camaldulenses*, *Martagon Chymistarum Lob.* *Aristolochia rotunda*; *Orobis sylvaticus Viciæ foliis C. B.* *Laurus*; *Chrysanthemum Bellidis folio*; *Digitalis lutea vel pallida parvo flore C. B.* *Hemionitis multifida*; *Horminum luteum glutinosum sive Colus Jovis*; *Trifolium bituminosum, quo nihil frequentius per totam Italiam, & Siciliam*; *Cytisus hirsutus J. B.* whole woods of chestnut; *Genista Hispanica*; *Colutea tum vescaria tum scorpioides*; *Ferula Lob.* *Genista tinctoria Hispanica*; *Vicia floribus pallide luteis amplissimis*; *Aster montanus luteus Salicis glabro folio*; *Millefolium odoratum*; *Hesperis sylvestris latifolia flo. albo parvo Park.* *Androsæum fœtidum sive Tragium, Speculum veneris majus*; *Pancreatium Lob.* In litore Neapolitano, *Lotus corniculata siliquis singularibus vel binis, tenuis J. B.* *Tribulus terrestris copiosissimè*; *Hyoscyamus albus*; *Juncus cyperoides maritimus Ad. Lob.* In arenosis maritimis Italiæ & Siciliæ frequens. *Mala insana*; *Italis Melongena*, Neapoli in foro olitorio venalia; *Cucumis flexuosus anguinus Lob. ibidem.* *Cucumeres Italis dicuntur Citrulli*; *Melones aquatici cucumere.* *Cucurbita anguina Lob.* *Malus Limonia fructu parvo, Limoncelles dicto, Neapoli & Messinæ.* *Fructus nucleis caret, hoc est, raros nucleos habet.*

In the night time we saw many fisher-boats out at sea with a light at one end of them, to invite the fish to follow the boat, where stands a fellow with an instrument in his hand, like a mole-spear, ready to strike them.

In the same vessel which brought us to Naples, we April 29.
began our voyage to Messina in Sicily, where we arrived Messina.

May 2. We sailed in sight of the *Æolides*, or *Vulcanica insulæ*, two of which, viz. *Stromboli* and *Vulcano*, do still burn; and *Stromboli* with that rage sometimes, that no man dares live upon it. As we passed by in the night time we saw it flame. It is difficult to enter in at the mouth of the strait by the *Faro* of *Messina*, because of the current, which runs here violently sometimes towards *Calabria*, sometimes toward *Sicily*: so that mariners, who have not often sailed this strait, are forced to hire a pilot of *Messina* to conduct them in; who, for the most part, when they see any vessel coming, go out in boats to meet it, and offer their service to guide it into the harbour, for which they will be well paid; our captain being forced to give ten pieces of eight. The haven of *Messina* is very commodious and secure, compassed almost round with the city on one side, and a narrow languet or neck of land on the other, resembling a large fish-pond. The city makes a goodly shew, as one comes to it by sea, the houses all along the shore being built of free-stone, tall and uniform, and having a fair broad key before them. But the streets within are narrow, not well paved, nor the houses near so fair. So that it is a proverb, *A Messina Affai polvere, pulce, & putane*. At *Messina* you have dust, fleas, and whores store. This city pretends to be the principal and metropolis of *Sicily* [*Regni caput*] and will by no means give place to *Palermo*. The viceroy is obliged to reside eighteen months here, and eighteen at *Palermo*. They stand much upon their privileges granted them by *Charles V.* Emperor; and one privilege they have, not to shew their privileges. They contend earnestly to have the staple, or monopoly of silk here, and had lately obtained a grant thereof from *Spain*: but the *Palermitans*, seeing how much this would redound to their prejudice, have got it reversed. It seems for-

merly

merly all the silk made in *Sicily* was vended at *Messina*, but by degrees *Palermo* hath got part of this trade to itself; and now pleads prescription for it. There is a great emulation and enmity between the *Palermitans* and *Messanese*, which involves the whole island; some cities taking part with one, and some with the other. The titles the *Messanese* give their city, in their publick instruments and writings, are the noble and exemplary city of *Messina*. The inhabitants are none of the most civil, but extraordinarily proud, and ready to expel the viceroy if he displeases them. The King of *Spain* hath four castles in and about this city, and the citizens as many in their hands. The city gates stand open all night, so that it's free for any man to enter in and go out at pleasure. Their * government among themselves is by six *Jurats*; four of the gentry, and two of the citizens. They are chosen after this manner. Every year there is a certain number who do *ambire magistratum*, or (as they phrase it) concur to come in cap; sometimes more, sometimes fewer. The gentlemen choose by themselves, and the citizens by themselves. The names of all the gentlemen of above twenty-five years of age, and likewise of all the artisans and tradesmen, are written in little scrolls of paper, and those rolled up and cast upon a table. Then comes in the King's delegate, and takes up of each heap of these scrolls, to the number of thirty-six, and those are the electors. These electors are brought into a room, where are boxes set according to the number of competitors, and have balls given them blue and white; the blue affirmative, and the white negative; and they give to every one of the candidates their suffrages as they please. Those eight of the noblemen, and four of the citizens which have most suffrages are elected, and come in cap. Now on the first of *May* these twelve have their names written in little scrolls of paper put in a cap; and a little boy puts his hand in and takes out one by one, to the number of six; and those six are the *Jurats* for that year. The *Jurats* for the nobility, tho' they be the greater number, yet can they do nothing without the

* The government of *Messina*.

consent of one of the *Jurats* for the citizens. After all this stir these *Jurats* have but little power, nothing to do either in civil or criminal causes of any moment.

Of † plants, we found here on the beech or languet of land, between the haven of *Messina* and the *Fretum Siculum*. *Peucedanum majus Italicum*; *Linaria angustifolia flore luteo, vulgari persimilis*; *Sideritis verticillis spinosis* J. B. *Fœnugræco sylvestri Tragi* in quibusdam accedens planta J. B. Some call this plant *Vicia Sesamacea Apula*; I think it might be fitly titled *Glaux peregrina annua*; *Vicia maritima multiflora alba, Messanensis nobis dicta*; *Spina Solstitialis flore conveniente, capitulis sessilibus*; *An Solstitialis mitior Apula Col. ?* *Thlaspi clypeatum hieracifolium majus* Park. *Trifolium stellatum* C. B. *Polygonum niveum*; *Securidaca siliquis planis dentatis* Ger. *Trifolium capitulis globosis sine pediculis caulibus adnexis*; In *Anglia* hanc speciem nuper invenimus. *Gramen tremulum maximum*; *Melilotus Messanensis procumbens, folliculis flavicantibus, per maturitatem, rugosis, sublongis, spicâ florum breviori, verum seminibus grandioribus quam Meliloti vulgaris*; *Ægilops Narbonensis* Lob. *Graminis Alopecuroidis nova species*; *Ornithopodium majus*; *Ammi vulgare*; *Cuminum sylvestre alterum Dioscoridis Italarum* Lob. *Sysirinchium majus* Ger.

In other places, especially on the hills above the city; *Ricinus sive Palma Christi* in the hedges plentifully, both here and in other places of *Sicily*. *Tordylium sive Sefeli Creticum minus* Park. *Convolvulus Althææ folio*; *Alsiné folio oblongo serrato, flore cæruleo* J. B. *Valeriana Mexicana*; *Arbutus*; *Sonchus lanatus Dalechampii*; *Geranium cicutæ folio, acu longissimâ* C. B. *Lupinus sylvestris flore cæruleo*; *Lupinus flore luteo*; *Senecionis an Chrysanthemi species folio Bellidis*; *Calix Senecionis calicem exactè refert, verum Flos circulum habet foliorum in margine ad modum Jacobææ*; *Plantula tenera est, radicem habens fibrosam, folia Bellidis*, *Lychnis parva, folio angusto, flore rubello*. Ab aliis facile distinguitur, quòd calix floris longus sit & gracilis, ipsâque florum petala ad unguem propè fissa velut *Alsines*. *Trifolium balicacabum sive vesica-*

† Plants growing about *Messina*.

R

rium

rium J. B. *Hedysarum clypeatum* Ger. flore purpureo & albo; *Trifolium bituminosum*, ubique; *Lotus siliqua quadrata* Ger. *Gladiolus Narbonensis* Lob. *Medica orbiculata lævis major & minor*. *Medica fructu ovali echinato*; *Scorpioides Bupleuri folio* Ger. *Anagyris foetida*; *Cratægonon seu Euphrasia erecta flore luteo magno*; *Radix* huic non simplex sed furculosa, annua. *Caulis erectus cubitalis aut etiam altior, quadratus, nonnihil lanuginosus*. *Folia* plerunque ex adverso bina, longa, angusta, rarius dentata, & omnino foliis *Cratægoni Euphrosynes* facie similia. *Spica florum* in summo congesta, quadrata, lanuginosa & nonnihil etiam viscida. *Flores* lutei, ampli, cucullati, figurâ florum *Ladani* segetum.

Cratægonon erectum flore vario ex albo & purpureo; Priori simillimum est, & in eo præcipue differt, quod non sit adeo procerum, quod caule & aliquando etiam margines foliorum rubeant, quod flores minores sint & coloris diversi; cuculli v. g. rubent, Labia medio al- bent, ad margines rubore diluuntur. Possent hæ plantæ ad *Christas galli* reduci; nos in catalogo ad *Melampyra* retulimus. *Holosteum Plantagini simile* J. B. *Gramen dactylon geminâ spicâ*; *Asphodelus major ramosus flore albo* J. B. *Aster luteus foliis ad florem rigidis* C. B. *Trachelium parvum, folio Bellidis subrotundo, Radix* ei alba, simplex, lignosa, annua. *Caulis erectus, striatus*. *Folia* alternatim posita, subrotunda, sine pediculis caulibus adnexa. *Flores* *Trachelii*. *Trifolium album rectum hirsutum valde* J. B. *Dorycnii species*; *Medica orbiculata fructu circa margines dentato*, an *Medica coronata* *Cherleri* J. B. *Lychnis ad Pseudomelanthium accedens, glabra ferè*. *Radice* nititur alba, lignosa, unde & planta annua esse videtur. *Caulis* nunc simplex ab eadem radice exurgit, nunc multiplex, vel saltem ab imo statim ramosus, pro ratione soli in quo nascitur, geniculatus. *Folia* ad genicula ex adverso bina, viridia, longa, angusta, *Graminis leucanthemi* foliis nonnihil similia, raris pilis hirsuta. *Flores* in summitatibus caulis & ramorum pediculis longis insident, quinquefolii pallide purpurei, vice staminum in medio habentes calicem e quinque foliolis in summo bifidis compositum, ut *Lychnidis sylvestris* flores. *Perianthium* seu calix floris striatus velut *Pseudomelanthii*. *Semina* nondum maturuerant. *Absinthium arborescens*; *Paronychia sive Alsinefolia incana* J. B.

Androsæmum fœtidum Park. i. e. *Tragium*; *Acanthus sativus*; *Sedum medium* flore albo, apicibus staminum luteis; *Ferula* Lob. *Thapsia latifolia* Hispanica Park. *latifolia* P. Castello in Catal. Messanensi. *Hyssopus sylvat.* *Halimus*. Lob. prope Pharon Messan. abundat, item in arenosis ad maris litus, versus meridiem, *Agnus castus* ibidem; *Oleander*, ad aquarum rivulos frequens; *Sorbus vulgaris domestica*; *Myrtus angustifolia*; *Thymelæa* Ger. *Hieracium calice barbato* Col. *Chondrilla saxatilis viscosa*, caule $\chi\eta\eta\mu\delta\sigma\phi\phi\phi$ Col. *Acetosa* *Ocymi folio* Neapolitana $\beta\epsilon\chi\epsilon\phi\alpha\lambda\eta\phi\delta\epsilon\alpha$ Col. ubique in Sicilia; *Scrophularia Rutæ canina dicta*; *Linnaria altera botryodes montana* Col. frequens in montosis; *Asteris species*, an *Baccharis* Col.? *Daucus* 3 *Dioscoridis* Col. *Carduus Chrysanthemus Narbonensis* Ger. *Carduus Chrysanthemus* Dod. *Carlina sylvestris vulgaris* Clus. *Psyllium vulgare*; *Kali majus* semine cochleato; *Lotus arbor*; *Cotinus Chamæespilo similis*; *Valeriana rubra* Dod. *Delphinium sylvestre*; *Antirrhinum luteum* Ger. *Colutea scorpioides*; *Chrysocome capitulis conglobatis* Ger. *Alsine folio crasso* P. Castell. *Lanaria sive Struthium Dioscoridis Imperato* J. B. upon the rocks. *Botrys vulgaris*; *Marrubium album fatuum* P. Castell. *Acarna flore purpureo-rubente patulo* C. B. *Millefolium odoratum*; *Sedum echinatum vel stellatum* flore albo J. B. *Hyacinthus comosus* Ger. *Anagallis cæruleo flore*, in Sicilia & meridionali parte Italiæ non minùs frequens est quàm flore phœniceo. *Asparagus petræus sive Corruca* Ger. *Smilax aspera*; *Antirrhinum minus* flo. carneo seu pallido, riëtù striato; *Atractylis*, in Italy and Sicily most common. *Heliotropium majus*; In barren fields and among rubbish every where. *Blitum rubrum minus*; *Buglossim angustifolium*; *Carduus galactites* J. B. i. e. *leucographus tenuifolius Messanensis* P. Castell. *Cerinthæ* flo. pallide luteo; *Chondrilla viminea* Lob. *Cicer sativum*; *Plurimæ Astraguli*, *Lathyri* & *Viciæ* species, quas tempore exclusi non satis accuratè distinximus; *Cymbalaria Italica*; *Cucumis aspinus*; qui & hîc & pluribus Italiæ, Melitæ, Siciliæque locis ruderalis frequens occurrit. *Hyoscyamus abus major* & *minor*, which sort only we found in Italy and Sicily; *Funcus acutus maritimus capitulis rotundis* C. B. *Stoebe Salaman-tica prima Clusii* Park. *Caucalis maritima supina echinato magno fructu*; Ad maris litus ubique tam in Sici-

lia quàm in Italia, *Nigella arvensis*; *Oxys lutea*; Ger. *Refeda major flore albo*, *Rhamnus salicis folio*; i. e. *Oleaster Germanicus Cordi*, ut vult P. Castel. *Saturcia* S. *Juliani* Ger. *Scrophularia urticae folio*; *Linaria pusilla procumbens latifolia, flore albo, riètu luteo*. *Radix* huic simplex quidem, verùm multis fibris majusculis stipata, sublutea, annua. *Cauliculi* exinde emergunt plures infirmi, rotundi, glauci. *Folia* Polygoni foliorum figurâ sed minora, glauca, nunc bina ex adverso nunc terna & interdum etiam quaterna simul ad eundem exortum, & proinde ramuli nunc singuli, nunc bini, nunc terni simul. *Flores* longis pedicellis subnixi, albi, riètu luteo, calcaribus tenuibus longissimis; pars illa floris quæ erigitur, in medio fissa in duas velut auriculas dividitur. *Florem* quinque circumstant foliola viridia pro calice. Postquam flos evanuit dediculus ejus deorsum incurvatur. *Vasculum feminale* rotundum apparet, *Anagallidis* vasculo simile; Verùm si curiose spectetur, duos habet lobos seminibus repletos pusillis, ruffis. Frequens est *Messanae* in vineis & hortis. Quam primum semen maturescit vasculum feminale dehiscit, adeò ut difficile sit ejus semina colligere. *Hyssopoides major flore grandiore*; *Melissa* quædam species non descr. *Tithymalus arboreus*; *Tithymalus folio longo glauco, caule rubro, seminibus verrucosis*; *Teucrium arboreseens lucidum*; *Iberis Cardamantica*; *Alaternus*; *Elatine flore cæruleo*; *Cyperus paniculis squamosis*; which I take to have been *Trasi*, but we regarded not the root of it. *Anthyllis leguminosa flore rubro*; *Erica ramulis per intervalla ternis*, *Chamæcistus annuus flore luteo*. *Urtica Romana*, passim; *Securidaca minor* Ad. *Lagopus altera angustifolia* Lob. *Coronopus foliis acutis in margine dentatis*.

And now that I have named so many strangers, let no man imagine that there are no plants common to Sicily and England; for that is so far from being true, that I believe there be but few plants growing in England but may somewhere or other be found in Sicily. There is in this respect great difference between northern and southern countries, the southern having a vast number of species which the northern miss, whereas the northern have but few which are wanting in the southern. And the reason is obvious, because there are places

ces in southern countrys which agree with the northern in the temperature of the air; as for example, the sides and tops of mountains: but no places in the northern which have like temperature of air with the southern. From this experiment I have made in comparing *England* with *Sicily*, I am induced to believe, that there are scarce any two countries in this continent so far remote the one from the other, but they have some common plants; however it be thought there be none common to *America* and this continent; which I cannot but wonder at, and wish it were more diligently inquired into.

We hired a *Feluca* to carry us to *Malta* and back a-May 5. gain. The first day being *May 6*. We had a brisk gale of wind, which brought us into *Catania*, 60 miles *Catania*, distant from *Messina*, by three of the clock afternoon. Here as in *Spain* we were fain to go into the market to buy all our provision of bread, meat, and drink ourselves. This is but a mean town, only some good cloisters there are in it. We heard much of St. *Agatha* their peculiar protectress. *May 7*. We proceeded as far as *Syracusa*, 40 miles by the way we had in prospect *Augusta*, famous *Augusta*. for the goodness of the wine there made, and sent abroad to *Messina*, *Malta*, and other places.

Syracusa that now is stands in a *Peninsula*, and is only *Syracusa*, that part of the ancient *Syracusæ* called *Nîo*. It is at present but a small city, indifferently well built, and thinly inhabited. It is fortified with very strong walls and bastions, especially towards the land. These works they told us were made by the *Knights Hospitallers*, when they were driven out of *Rhodes* by the *Turks*. They then intended to have settled themselves here, but the Emperor *Charles V.* not liking their company in *Sicily*, gave them *Malta*. About a mile and half from the present city we saw some ruins of the ancient *Syracusæ*, among other things the rudera of an *Amphitheatre*. * We saw * The also what is commonly shew'd to all strangers, the grot grot cal- at present called *orecchio di Dionysio* or *Dionysius's* ear, led *Diony-* because it is hewn out of the rock in fashion of a man's *sinus's* ear. They fancy that *Dionysius* had a chamber above this cave or grot, wherein he sat and over-heard what- ever was spoken, or but whispered in the grot below,

where he used to put suspected persons together in prison. The grot is cut out of the side of a high cliff or rock, and is itself very high, and goes a little winding, but is not long. In our return from *Malta* we entred into and viewed one of the ancient * *κοιμηθῆαι* or burying places, which they call *Catacumbe*, and of which there are several both here and in *Malta*. That we enter'd into was of St. *Antonio's* church. Herein were many vaulted or arched walks hewn out of the rock, and on each hand all along other vaults at right angles with them, the floor, or bottom of which lateral vaults, was some foot and half higher than the floor of the main walk, and all hewn into troughs or *loculi*, wherein they deposited their dead bodies; in some of these were 20 *loculi*, in some more, in some less. In this *cæmeterium* at intervals are round rooms or halls cupolo'd, where several of the forementioned walks meet: for the whole is a kind of maze or labyrinth, and very difficult to thread, being of a huge extent; so that I believe, there were many thousands of bodies laid up here. These *cuniculi* or vaulted walks are in many places earth'd, and stopp'd up by stones and rubbish fallen from the roof. They told us that the vault of St. *Lucia* reach'd as far as *Catania* under ground, which though it be a monstrous untruth, yet we may thence gather, *Multum esse quod vero supersit*.

May 8. The wind being contrary, we were forced to make use of our oars, and rowed as far as *Capo Passaro*, *apo* anciently called *Promontorium Pachynum*, forty miles distant from *Syracusa*. Upon the utmost point of land stands a little castle held by a garrison of about twenty men. This castle stands now in a little island, made so by the force of the sea, which not long since brake it off from the land. The wind being contrary, and blowing a stiff gale, made the sea so rough, that we dared not venture out, but were forced to rest here two nights. Howbeit we entertained our time pleasantly enough in searching out and describing of plants, which this little island afforded great variety of. v. g. † *Lotus filiquâ quadratâ* Ger. *Lotus filiquis Ornithopodii*; *Lotus edulis* Cre-

* The ancient *κοιμηθῆαι*, now called *Catacumbe*.

† Plants observed in the island of *Capo Passaro*.

ticus Park. fortè *Lotopisum Belli*, which we found also about Naples, tho' it be not there mentioned. *Lentiscus*; *Chamærrhipes* sive *Palma minor*; *Limonium folio sinuato* Ger. *Chrysanthemum Creticum* Ger. *Aster luteus foliis ad florem rigidis* C. B. *Medica magna turbinata* J. B. *Auricula muris Camerarii*, *Medica doliata spinosa*; *Gnaphalium roseum* Park. *Hedysarum clypeatum minus flore purpureo*; *Onobrychis fructu echinato minor* C. B. Flores huic parvi purpurei, semen grande; *Trifolium halicacabum* sive *vesicarium*; *Asphodelus major ramosus flore albo*; *Asph. luteus*, sive *Hasta regia*; *Asp. minor* Clus. *Echium procumbens flore parvo cæruleo*; *ornithogalum spicatum* Ger. *Faacea lutea capite spinoso*; *Carduus lacteus peregrinus* Cam. an potius *Silybum majus annuum* Park? *Carduus galactites* J. B. *Teucrium Bæticum* Ger. *Tragopogon perenne foliis angustis incanis, floribus dilutè cæruleis*, an potius *Scorrozera* dicenda? *Sanamunda tertia* Clus. *Anonis viscosa, spinis carens lutea major* C. B. *Convolvulus cæruleus minor, folio oblongo* Ger. *Ammi vulgare* & *foliis magis incisis*; *Medica orbiculata major* J. B. *Tordylium majus*; *Scorpioides Bupleuri folio*; *Crithmum spinosum* sive *Pastinaca marina*; *Passerina* Lob. *Aparine semine Coriandri Saccharato*; *Trifolium stellatum* C. B. *Cerinthe flore luteo*; *Melissa peregrina flore albo*, *Cortex ramulorum antiquiorum* (caules enim perennant) cinereus, juniorum ruber. *Caules quadrati. Folia bina ex adverso, quàm Melissæ minora, pediculis satis longis subnixa. Flores cucullati albi, cum aliqua tamen ruboris mixtura. Vascula seminalia qualia Moluccæ levis ferè, excepto quod in 5 lacinias dividantur, duabus inferius, tribus superius sitis. Semina itidem qualia Moluccæ. Odor plantæ gravis. Nigella arvensis; Sysirynchium majus; Limonium parvum Narbonense oleæfolium; Cichorea spinosa Cretica Ponæ; Daucus lucidus; Asparagus petræus sive Corruda; Tragos sive Uva marina major herbariorum* Lob. *Beta Cretica spinosa* Park. *Trifolium capitulis glomeratis, glomerulis spinosis*; *Linum sylvestre cæruleum*; *Caltha arvensis*; *Atractylis*; *Cruciata minima muralis* Col. *Coronopus foliis acutis in margine dentatis*, i. e. *Plantagini affinis Bibinella Siciliae herbula* J. B. *Malva flo. carneo minore*; *Ex radice alba simplici* plures emittit caules humi procumbentes, hirsutos, superna parte rubentes. *Folia ima subrotunda, longis pediculis*

annexa; quæ in caulibus sunt in tres aut quinque lacinias dissecta, hirsuta & circa margines crenata. Flores parvi, quinquefolii, carnei. Semina qualia malvæ vulgaris; *Alaternus*; *Phyllyrea latifolia seu serrata secunda* Clus. *Glaux peregrina annua*; *Iva moschata Monspeliensium*; *Asparagus sylvest. spinosus* Clus. *Sedum minus luteum ramulis reflexis*; *Geranium procumbens Althææ folio*.

May 10.

Punto
Cerciolo.

We put to sea again, but the wind still continuing contrary, and the sea very rough, when we were gotten about half over the channel, we were forced to return back again to the *primo terreno* of Sicily, viz. the castle of *Puzallu*. The greatness of the waves not permitting us to come a shore there, we rowed six miles further south, and put in at a little cove, called the harbour of *Punto Cerciolo*. The weather continuing foul, we were detained here three days, having no other shelter than a pitiful small hut or two, which the two centinels (who stand constantly at this point to watch and give notice to the country of the coming of *Corfairs*) had set up for themselves to creep into in stormy weather. We should have been glad of fresh straw to lie in, having nothing in our kennel but old short straw, so full of fleas, that we were not able to sleep in it. Our diet was the blood and flesh of sea tortoises that our seamen took by the way, and bread we brought along with us. Wine we got at a house about half a mile off our lodging, but when our bread failed, we were fain to send eight miles for more: fish or flesh we could get none. This stop gave us leisure enough to search the shores and neighbouring country for plants; of which we found, † *Panax Herculeum majus* Ger. *Cinara sylvestris* Ger. *Ruta sylvestris*; *Limonium elegans Rauwolfii*; *Beta Cretica spinosa* Park. *Medica orbiculata fructu minore*; *Med. orbiculata elegans, fructu circum oras rugoso*; *Hypericum foliis parvis crispis seu sinuatis*; *Persoliata angustifolia montana* Col. *Siliqua arbor seu Panis S. Joannis*; *Medica marina*; *Anonis lutea parva procumbens*. In arenosis nascitur radice albâ, longâ, simplici; fibris nunc paucioribus nunc pluribus & majoribus donatâ; *Folia* ei parva, tripartito divisa, pediculis nullis, verum duæ inferiores partes cauli adjacent ut in *Lotis* sit, ac proinde hæc

† Plants found about *Punto Cerciolo*.

planta

Planta eodem modo trifolia est quo Loti quinquefoliæ, Quinetiam folia saturè viridia sunt, in margine eleganter dentata, alternatim posita. Flores lutei Anonidis vulgaris. Siliquæ breves, tumidæ, subrotundæ, duobus intus ordinibus seminum figurâ lienis præditorum. In arenosis maris litoribus circa Siciliam frequens, v. g. prope Cataniam, circa Promontorium Pachynum & hoc in loco. *Cistus mas 4 folio oblongo albido* J. B. *Lotus flore luteo, corniculis articulatis*. Radix ei simplex alba, in nonnullis tamen plantis ima parte in fibras spargitur. Cauliculi plures in terram procumbentes. Folia glauca, pentaphylla si auriculas ad caulem hinc inde appositas adnumeret. Flores parvi, lutei, Trifolii corniculati sed minores ad nodos nunc singuli nunc bini, & interdum etiam terni. Siliquæ graciles, longæ, contortæ in spiram seu corniculatæ, articulatæ, semina oblonga in singulis internodiis continentia. *Caucalis maritima* J. B. *Smyrnum Creticum*; *Gladiolus Narbonensis*; *Polium montanum album*; *Saxifragia Venetorum* Ad. *Psyllium vulgare*; *Acanthium Illyricum*; *Telephium scorpioides* Anguillaræ: *Tragos sive uva marina major* J. B. *Opuntia marina*, in litus rejecta, and many others before observed in other places.

The wind ceasing we put to sea again, and had a May 13. very good passage over to *Malta*. By the way we saw our seamen take several tortoises on this manner. † When they espy a tortoise floating on the top of the water (as they can easily do at a good distance) with as little noise as they can possibly they bring their boat up close to him; then they either catch him with their hands and draw him up into the boat, or, if they cannot get near enough to do so, one leaps out of the boat into the sea, and turns the tortoise on his back, and then with ease drives him before him up to the boat; the tortoise being not able to turn himself, or swim away on his back. They say (and it is not unlikely) that the tortoise, while he floats thus upon the water, sleeps; which is the reason why they are so still, and make so little noise in bringing their boat up to him. One of these tortoises which they caught had two great

† The manner of taking tortoises.

† Bernacle bunches of those they call † *Bernacle-shells* sticking or shells growing to his back, and some of them the largest and growing fairest of that kind which we have seen. As for that opinion of a bird breeding in them (which some have affirmed with much confidence (and of which, *Michael Meyerus* hath written a whole book) it is, without all doubt, false and frivolous. The bernacles, which are said to be bred in them, being hatch'd of eggs of their own laying like other birds; the *Hollanders*, in their third voyage to discover the north east passage to *Cathaia* and *China*, in 80 degrees, 11 minutes of northern latitude, having found two islands, in one of which they observed a great number of these geese sitting on their eggs, &c. as Dr. *Johnson* relates out of *Pontanus*. As for these shells, they are a kind of *Balanus marinus*, as *Fabius Columna* proves, never coming to be other than what they are, but only growing in bigness as other shells do. All the ground of this fancy (as I conceive) is because this fish hath a bunch of *cirri*, somewhat resembling a tuft of feathers, or the tail of a bird, which it sometimes puts out into the water, and draws back again. We were much surpris'd to find of this shell-fish in these seas so southerly, and far from the scene of the bernacle-fable.

Plants observed I shall now set down what plants we found about *Catania* and *Syracusa*. About *Catania*, *Scammonea Monspeliensis* affinis *Park. Plumbago Plinii*; *Agnus castus*; which *Catania* and two we observed also in many other places. *Cruciata Syracusa. marina*, *Anonis marina procumbens flore luteo*, jam descripta; *Sedum minimum non acre totum rubrum, flore hexaphyllo purpureo*. Upon mount *Ætna* we found *Tragacantha C. B.* Towards the top of the mountain we observed *Barberry-trees* growing plentifully, which is a rare shrub in hot countries, and which we found no where else in *Italy* or *Sicily*. At *Messina* they shewed us, for a rare plant, the common *Gooseberry* bush. About *Syracusa*, *Thymum Creticum* Ger. *Origanum flore albo, capitulis squammatibus rotundis*; *Verbascum 4 Matthioli*. The same kind of *Melissa* we found about *Messina*, and have already described; *Teucrium Bæticum*; *Facea lutea capitulis spinosis*; *Lagopus quadam procumbens spicâ longiore*; *Anonis purpurea minima supina non spinosa*. Many others we might doubtless have found, had it been safe for us to have searched the rocks near this city.

O F
M A L T A.

THE island of *Malta* is twenty miles long, twelve miles broad, and sixty miles in circuit; distant from the *primo terreno*, or nearest part of *Sicily*, sixty miles; from the cape of *Calipia*, anciently called *Promontorium Mercurii*, the nearest point of the continent of *Africa*, 200 miles (as divers of the most skilful and experienced pilots did affirm to *Abela* for an undoubted truth) from the cape of *Spartivento* in *Italy*, but 190. So that upon account of vicinity, it is rather to be attributed to *Europe* than *Africa*; especially if we allow *Sicily* to have been of old time united to, and so part of the continent. The reason why others make it a member of *Africa* is, because the present inhabitants of the country speak a kind of *Moreſco* or *Arabick*.

The old city, called *Ciitta notabile*, situate about the middle of the island, hath 35 degrees, 15 minutes of northern latitude, and the longest day there is of 14 hours, 52 minutes.

I am not ignorant that *Heylin* and others, who reckon this among the isles of *Africa*, place it nearer the coast of *Barbary*, assign it less latitude, and allow the longest day no more than 14 hours; but I do in these, and other particulars, follow the more accurate observations of *Johannes Franciscus Abela*, a learned man and native of this island, in his *Malta illustrata*, written in *Italian* and published in *Malta*, Anno 1646. in folio.

The whole island, from the shallowness of its soil, there being in few places above two foot depth of earth before you come to firm stone; and from the
lowness

lowness of its situation, not much elevated above the level of the water, and having no considerable hill in it, seems to have been in the most ancient times nothing else but a great rock, wholly overwhelmed and covered with the sea; especially if we consider the multitude of sea shells of all sorts, sharks teeth, vertebres of thornbacks, and other fish bones petrified, found all over the island, even in the highest parts of it, and most remote from the shore. For, that these were formed by some plastick power in the stone-quarries, being nothing else but the effects or productions of Nature sporting herself in imitation of the parts and shells of these animals, I can hardly be induced to believe; Nature (which indeed is nothing else but the ordinary power of God) not being so wanton and toyish, as to form such elegant figures without further end or design, than her own pastime and diversion. But a very likely thing it is, that the sea being shallow above this rock for some ages before it came to be uncovered, there should great beds of shell-fish harbour and breed in so convenient a place, and, the water leaving them, their shells remain and petrify. I confess it's hard to imagine, how the carcasses of so many sharks should come to be lodged here, as by the multitude of teeth that have been for so many years past, and are still daily digg'd up, we must needs grant; unless perchance they remain of the heads of such sharks as were caught and eaten by the fishermen, who it is likely, after the discovery of this rock, frequented here, and made it a station for fishing before it came to be inhabited.

To this difficulty, Mr. *Steno* returns answer in these particulars, 1. That such sharks, or sea-dogs, have each of them sixty teeth and more, and that all the time they live they breed new teeth. 2. That the sea, agitated by the winds, is wont to protrude those bodies it meets with towards some one place, and there heap them together. 3. That sharks swim in great troops or shoals, and consequently that the teeth of many of them may have been left in one place. 4. That in the *Malta* earth, besides these sharks teeth, are found also sundry cockle-shells; so that if the number of teeth should in-

cline

cline a man to ascribe their production to the earth, on the other hand, the make of the same teeth, and the abundance of them in every animal, and the earth like the bottom of the sea, and other marine bodies found in the same place, do favour the contrary opinion.

* The soil, notwithstanding the rockiness and shallowness of it, hath been by the ancients celebrated for fertility;

Fertilis est Melite sterili vicina Cosyria
Insula. Ovid. Fast.

But undeservedly if we understand it of corn; for there is not much wheat sown here, and that we saw upon the grounds was but thin and slight. And though barley be their chief crop, and of which the country people make their bread; yet have they not near enough of that to serve the ordinary uses of the inhabitants; so that they are forc'd to fetch most of their bread-corn out of *Sicily*.

† The main commodities which the island yields, wherewith the inhabitants drive a good trade, and enrich themselves, are 1. *Cumin-seed*, which they call *Cumino agro* or sharp Cumin; of which are gathered about 3000 *Cantares* yearly; one *Cantare* being equal to 116 pound weight *English*. 2. *Anise-seed*, which they call *Sweet-cumin*, of which are gathered and transmitted into foreign parts 1000 *Cantares* yearly. These seeds are sold at 7, 8, or 9 crowns the *Cantare*: and we were told that the year before our being there [*Ann.* 1663.] were vend'd 7000 *Cantares* of both sorts. 3. Cotton-wool, called in *Latin* *Xylone* or *Gossypium*, of which they send abroad yearly 14000 *Cantares* in the husk.

They have of late begun to plant *Indigo*, which my author saith agrees with the soil, and likes and thrives there very well. He also mentions a sort of excrescence or moss or scurf, which the rocks about *S. Maria el Aalia* and other places on the north side of the island naturally put forth, called by the country people *Vercella*,

* The nature of the soil.

† The commodities of *Malia*.

which

which they scrape off with an iron instrument, and having washed it with a certain liquor, and mingled it with other ingredients [he tells us not what that liquor or those ingredients are] they expose it to the sun, and use it to dye wool of a carnation colour. This kind of mofs, called in *Wales* *Kenkerig*, and in *England* *Cork* or *Arcel*, is gathered and used for the same purpose in *Wales* and the North of *England*.

Malta hath been famous of old for a breed of little dogs called *Catuli Melitæi*, the race whereof is quite extinct: and now their cats are as much esteemed. The roses of *Malta* contend for sweetness with those of *Pæstum*; and the honey with that of *Hybla* or *Hymettus*: so that some suppose this island had its name *Melita* from *Mélu* signifying honey.

The air is clear and healthful, and the people long lived. Not much rain falls here, yet sufficient to supply water to feed their springs; of which there are several in the high grounds, or small hills about the middle of the island. That these * springs proceed from rain-water only my Author doth very well prove, because they are found only at the foot of little hills, consisting of a certain porous stone which the *Maltese* call *Giorgiolena*, or a chalky earth which easily imbibes the rain. And to speak in general, that all springs and running waters owe their rise and continuance to rain, seems to me more than probable; 1. Because I never yet saw any springing of running waters breaking out, either on the top of a hill or so near the top, but that there was earth enough above them to feed such springs, considering the condition of high mountains, which are almost constantly moistened with clouds, and on which the sunbeams have but little force: and yet I have made it part of my business in viewing the highest hills in *England* and *Wales* to examine this particular. Nor have I yet ever observed such springing and running waters in any plain, unless there were hills so near, that one might reasonably conclude they were fed by them. 2. Many springs quite fail in dry summers, and generally all abate considerably of their waters. I am

* The original of springs.

not ignorant that some make a distinction between failing springs and enduring springs, and would have the former to proceed from rain, and the latter from the sea; but I see no sufficient foundation for such a distinction, and do think that both the one and the other are to be attributed to rain; the failing and enduring being to be referred either to the different quantity and thickness of earth that feeds them; or to the different quality, the one more quickly the other more slowly transmitting the water, or some such like accident. 3. In clay grounds, into which the water sinks with difficulty, one shall seldom find any springs; but in sandy, gravelly, rocky, stony or other grounds into which the rain can easily make its way one seldom fails of them. 4. They who would have fountains to arise from and be fed by the sea have not as yet given a satisfactory account of the ascent of water to the tops of mountains and its efflux there. For though water will creep up a filtre above its level, yet I question whether to so great an excess above its *æquilibrium* with the air, whereas in pumps we see it will not rise above two or three and thirty foot; or if it should, whether it would there run out at the top of the filtre, we not having as yet heard of any experiment that will countenance such a thing. For the ascent and efflux of sap in trees I suspect may be owing to a higher principle than purely mechanical. As for the *Sabulum Quellem* or *Arena bulliens* of *Helmont*, I look upon it as an extravagant conceit of his; and yet some ground there is to believe, that there is a kind of earth lying up and down in veins, which doth like a filtre retain the water and carry or derive it along as it lies from place to place, till it brings it to the *superficies* of the earth, where it runs out. In other places there are subterraneous channels like the veins in animals, whereinto the water soaking into the earth is gathered, and wherein it runs as above ground out of smaller rivulets into greater streams: and where one of these veins opens in the *superficies* of the earth there is a spring greater or lesser according to the magnitude of the vein. Nor need we wonder that springs should endure the length of a dry summer, for in many sorts of earth the water makes its way but slowly; since we see that in those troughs or leches, wherein

unal-

laundresses put ashes, and thereupon water to make a *lixivium*, the water will be often many hours before it gets all through the ash, and the lech ceases to drop; and in many chymical preparations which are filtred, its long before the liquor can free itself and wholly drain away from the earthy and feculent part.

Some attribute the original of fountains to watery vapours elevated by subterraneous fires, or at least by that generally diffused heat which miners find in the earth when they come to fifty or sixty fathoms under ground; and condensed by the tops and sides of the mountains as by an alembick head, and so distilling down and breaking out where they find issue. And in reason one would think, that generally the deeper one digs in the earth the colder one should find it, sith the urinators affirm that the deeper they dive in the sea the colder still they find the water. And yet were there such subterraneous heats, they are not so great as that it is likely they should elevate vapours so high, through so thick a coat of earth, which it must be an intense heat indeed will carry them through, which heat none say is found near the superficies of the earth.

Mr. *Hook's* account, *viz.* that salt water being heavier than fresh, by reason of its preponderancy it may drive up the fresh as high above the surface of the sea as are the tops of montains before it comes to an *æquilibrium* with it, is very ingenious, and would be most likely, were there continued close channels from the bottom of the sea to the tops of mountains, not admitting the air, which I believe will not be found in many places. What is said about † ebbing and flowing wells in confirmation of it adds no strength; for none of those ebbing and flowing wells that I have yet seen do at all observe the motion of the sea, but reciprocate two or three times or oftener every hour, excepting one on the coast of *South-wales* in a sandy ground by the sea-side not a quarter of a mile from the water, which observes the tides; but 't is no running water, nor doth it I believe arise above the level of the sea. I do therefore shrewdly suspect for fabulous whatever hath been written of wells remot^e

† Ebbing and flowing wells.

from

from the sea, which in their ebbing and flowing observe its motions. But for a reason of the ebbing and flowing of these wells I must confess I am hitherto at a great loss. Whereas some say that rain sinks not above a foot or two deep into the earth, if they understand it of all earths it is manifestly false, for that we see in coal delphs, and other mines, in wet weather the miners are many times drown'd out (as they phrase it) though no water run down into the mouths of their pits or shafts; and in sandy and heathy grounds, in the greatest rains, little water runs off the land, as on *Newmarket-beath*, *Gogmagog-hills*, *Salisbury-plain*, &c. and therefore it must needs sink in: and out of the mouth of *Pole-hole*, near *Buxton*, in the *Peak of Derby*, and other caves in the sides of mountains, in rainy seasons, streams of water many times run out; where in dry weather and summer time there are none.

Neither is this opinion we defend any more repugnant to the scripture than the other. For whereas it is said, *Ecclef. 1. 7. All the rivers run into the sea, yet the sea is not full; unto the place from whence the rivers come thither they return again*; we grant it to be most true; nay we think such a circulation absolutely necessary to the being of springs, only we assert it to be performed not under ground, but above: that is, the clouds take up water out of the sea, and pour it down again upon the earth; and from part thereof falling upon and soaking into the higher grounds arise the springs.

* But to return to *Malta*; the haven is very commodious and secure, divided into two by a little promontory or neck of land some 1500 canes long, and 380 broad, upon which the new city is built. Of these two that on the west side the city is called simply and *per Antonomasiam Marfa*, that is, the haven, and is in length 1800 canes or poles, of ten palms the cane *Roman* measure, and is sub-divided into other creeks or *sinus's*. That on the east side, called *Marfa moschetto*, is as large as the other; in a little island within which is the *Lazaretto*; near it ships that come from infected places keep their quarentine.

* The haven.

S

† The

† The new city, called *Valetta*, is divided into twenty streets, eight in length and twelve in breadth, all streight. Though they be not paved, yet they need it not, the town being built upon a solid rock. They want no uniformity but being level, which, the place being uneven, up-hill and down-hill, will not admit. The houses are all of stone, flat-roofed and covered with plaister, which is sufficient here, there falling but little rain; tho' they be not tall, yet are they neat and pleasant. Upon the roofs of their houses in summer time the people set their beds, as at *Aleppo*, and sleep in the open air. The number of the inhabitants of all ages, according to a survey taken in the year 1632, was 10744, the number of houses 1891, which sum is I believe since that time much increased. Over the gate of this city leading to the land, called *Porta reale*, you have this inscription, giving an account of the first founding and building of it.

Fr. Jo. de Valetta sacrae Domus Hospitalis Hierosol. M. Magister, periculorum anno superiore à suis militibus populoque Melitæo in obsidione Turcica perpefforum memor, de condenda nova urbe, eaque mœnibus, arcibus & propugnaculis ad sustinendam vim omnem propulsandosque inimici Turcæ impetus aut saltem reprimendos munienda, inito cum Proceribus consilio, Die Jovis 28 Martii 1566, Deum omnipotentem Deiparamque virginem & numen tutelare D. Joannem Baptistam Divosque cæteros multa precatus, ut faustum felixque Religioni Christianæ fieret, ac Ordini suo quod inceptabat bene cederet, prima urbis fundamenta in monte ab incolis Sceberras vocato jecit, eamque de suo nomine Valettam (dato pro insignibus in Parma miniata aureo leone) appellari voluit.

Fr. Antonius de Paula M. Mag. invictiss. Conditore tantæque rei monumentum P. C. Anno ab Urbe Fundata 68.

It is fortified with impregnable walls and bulwarks, especially toward the land, where one would think there are too many, and yet they are still adding more. Within the outmost wall, or between the two walls

† The new city called *Valetta*.

and

and outworks, they have inclosed a great space of void ground, whether with design to enlarge the city, filling that space with houses, or to receive the country people in case the enemy should land upon the island, I know not. All the walls and bulwarks are mined or vaulted underneath, that so, in case the besiegers should get upon them, they might be blown up and render'd useless. The charge of all these walls, castles, and fortifications would be intolerable, had they not stone at hand, and slaves to work. This city is well served with all provisions, there being every morning a market plentifully furnished with bread, flesh, fish, poultry, fruits, herbs, &c. of the best in their several kinds, and to be bought at easy rates.

The most considerable buildings in this city are, 1. The church of *St. John Baptist*, patron of the order, wherein are many chapels and altar-pieces richly gilded and adorned. Here lie buried the grand masters that have been since the order was translated hither in a vault under ground; several of them having in the church monuments with inscriptions. This church is not yet quite finished.

The castle of *St. Elmo*, which stood here before this city was built, on the utmost point of the promontory: a strong place but of no great capacity. Here we observed the like winding ascent to the top without any steps or stairs, as in the tower of *St. Mark* at *Venice*. Upon the top of this castle is constant watch and ward kept. When they descry any vessel coming toward the island, be it great or small, they set up a flag suitable to the bigness of the vessel; if two vessels two, if three three, and so on according to their number; signifying also by the place where they set these flags, from what quarter, east, west, north, or south, such vessel or vessels come: so that the city is presently advised what vessels and how many are near the port. In this castle are imprisoned such knights as have committed any misdemeanor, and held in restraint longer or less time, or further proceeded against according to the merit of their fault.

Before this castle are the *Granaries*, where the provisions of corn for the city are kept. These are nothing but caves hewn out of the rock in the form of a *cupola*, or ordinary bee-hive, having each a narrow mouth above.

They are constantly stored with corn enough beforehand to serve the whole city for a year. They have also magazines or stores of wine, oil, and all other necessaries.

4.
The Al-
bergs or
halls.

The *Alberghs* or halls of the eight several nations (*Lingue* they call them) of the order. The nations are *French, Italian, German, English, Provencal, Auvergnois, Castilian, and Aragonian*. These *Albergs* are most of them fair buildings like colleges; and in each of them is a publick hall, wherein the knights of each nation dine and sup as many as please; the others have their parts or *demensum* sent to their lodgings, or dispose otherwise of it as they see good. The seignior of each nation is superior of the *Alberg*, grand prior of his nation, of the great cross (*Gran Croce* they term it) and one of the privy council to the great master. These are distinguished from the rest by a great white cross upon their breasts, made of silk sewn into their garments. Here is an *Alberg* for the *English* nation, or rather a piece of ground inclosed, with the foundation of an *Alberg*, the walls being scarcely reared up. This ground, we are told, some of the citizens would have bought and built upon, but the *grand master* and council refused to sell it, not despairing, it seems, that one day our nation may be reduced again to the obedience of the *Romish* church.

5.
The ar-
mory.

The *Armory* [*Sala di Arma*] within the palace of the *great master*, consisting of two rooms; the one (which they call the hall) the fairest and largest room employed for such an use that we have any where seen; the other much lesser. In both together are kept arms for 30000 men, so intire, clean, bright, and fit for use, that we were much taken with the sight of them. Here are some of those little drakes that may be charged behind, a leather gun, and other curiosities, the like whereto we have seen in several armories.

6. The *Hospital* [*Infermaria*] a fair building, which they The Hof-are now enlarging. The sick persons are served by the pital *Noso-*knights, viz. such a number of knights are appointed *dochium*. to carry them their meat daily with cap in hand; which thing we saw them do in this manner. The meat was all brought into the middle of a great room where many of the sick lay. Then one of the knights (the steward I suppose he was) read the names of the sick

sick one by one out of the physician's bill, wherein was prescribed each sick person's diet. As he read a name the cook took his part whose name was read, and, dishing it up, deliver'd it to one of the knights, who carried it to his bed-side, where stood a stool cover'd with a napkin having bread and salt upon it. This duty their very name intimates to belong to them, *viz.* knights, *i. e.* servants of the hospital, and therefore we may be excused if we have been more particular and circumstantial in describing the manner of it. If any of the order falls sick, he is not to stay in a private house, but presently repair hither, where he is most carefully tended, one or two knights being appointed to be always by him.

The *Palace of the Great Master*, where he hath several apartments for winter and summer. There is also a stable of good horses, in which, besides coach-horses and ordinary saddle-horses, are kept 40 or 50 great horses. A thing worth the noting in this island, where there is so great scarcity of horses, that knights and persons of quality ride upon no better than asses.

The *Slaves Prison*, a fair square building, where all the slaves in the city lodge every night so long as the galleys are abroad in *Corso*. At the ringing of the *Ave-Mary bell*, which is just at sun-set, they are to repair thither. When the galleys are at home, those that belong to private persons are permitted to lodge in their masters houses. The number of slaves now in town was about 2000 belonging to the order, and 300 to private persons, besides those that were abroad in the galleys.

Besides this new city, there are three considerable towns distant from it only by the breadth of the haven. 1. The *Isola* (as they commonly call it) or town of *Senglea*, with the fort of *St. Michael*, seated in a *Peninsula* made by two creeks running out of the principal haven. It contains 994 houses, and 4050 souls. For the stout resistance it made to the *Turks* in 1565, it obtain'd the name of * *Città invitta*. 2. The *Borgo* (as they call it) *i. e.* *Burgo del Castello à mare*, built likewise on a little *Lingua*, or neck of land, between

* The invincible city.

two creeks of the same haven, on the utmost cape whereof stands the castle of *St. Angelo*, divided for greater strength from the town by a ditch of water cut cross the *Lingua*. This burgh contains 782 houses, and 3063 souls. For its valour and fidelity in holding out so resolutely against the *Ottoman* army besieging it, *Anno* 1565, it is deservedly honour'd with the title of * *Città vittoriosa*. Between these two burghs is a secure harbour, where the gallies and most of the other vessels of the city lie; which, in time of danger, is shut up with a great iron chain. 3. *Birmula*, rather a suburb of *Senglea*, than a distinct town: it contains 642 fires, and 2778 souls.

May 25.
The old
city.

We rode out to see some part of the country; passing two great villages (*Casales* they name them) we came to the old City, called anciently *Melita*, after the name of the island, now *Città notabile*, a small place at present, but well fortified, containing no more than 565 houses, and 2620 souls. It hath been formerly much greater, and incomparably more populous. The new City, as being more conveniently situate, daily draining away, and withdrawing its inhabitants. Here they shew'd us the pillar of *St. Paul* (as they call it) where when he stood preaching (as they fondly believe, or at least would persuade us) his voice was heard distinctly all over the island. 2. The Grot of *St. Paul*. Here out of a small cave is taken that white earth, called *Terra di S. Paolo*, and, by some, *Terra sigillata Melitenfis*, which they seal and sell to strangers, attributing thereto great virtues against all poison and infection.

Terra di
S. Paolo,
or *Sigillata*
Melitenfis.

This cavern, though there be continually great quantities of earth taken out of it, according to their conceited tradition, retains still the same dimensions, becoming no greater than it was at first. That *St. Paul* suffer'd shipwreck on the coast of this island, and winter'd here, and not on that other *Melita* in the *Adriatick* sea on the coast of *Dalmatia*, now called *Meleda*, I think it sufficiently proved and made clear by *Chuverius*, *Abela*, and others: but that, upon occasion of a viper fastening on his arm, he changed all the serpents of the island into stones, and endued the earth with an alexi-

* The victorious city.

pharmical

pharmical quality to resist and expel poison, is a superstitious and ungrounded fancy.

From the old city we rode on to the *Great Master's* ^{The Gr.} *Boschetto*, where he hath a pretty little palace in form ^{Master's} of a castle, from the top whereof we had a good prof- ^{Boschetto.} spect of the island. Here are a great number of gardens and orchards well furnish'd with all sorts of fruits and flowers, good water-works, and a grove of trees: indeed this palace wants nothing for conveniency or delight. The palace is situate upon a little hill, and the gardens lie under it in a hollow or bottom, almost compassed about with rocks.

But to speak of the island in general, * *Malta* hath been inhabited by several nations, and often changed masters. The most ancient inhabitants are by *Cluverius* taken to have been the *Phæaces*, mentioned by *Homer*, who were expelled by the *Phœnicians*. The *Phœnicians* were most of them driven out by the *Grecians*. After this it changed masters rather than inhabitants, being first subdued and held by the *Carthaginians*; then for a long time by the *Romans*: after that the *Goths* came hither, who were driven out by the *Eastern Emperors*. Next the *Saracens* possess'd themselves of it. The *Normans* expelled them and got the dominion. Then the *Germans*, or *Suevi*, became lords of it; then the *French*; then the *Aragonians*, and *Spaniards*; and now last of all the order of the knights hospitallers. The history of all which changes, if any man desire to be fully and particularly acquainted with, let him consult *Abela*. In all these changes, it followed for the most part the fortune of *Sicily*, as having little strength to resist any foreign power invading. It is now so well fortified and manned, that it would prove a very difficult matter for the greatest Prince or Potentate in the world to take it by force; having, when it was in far worse condition than now it is, resisted and baffled the arms of one of the greatest Emperors the *Turks* ever had.

† It is very populous, containing between thirty and forty great *Cassales* or villages, some of them above 500

* The several inhabitants and conquests of *Malta*.

† The number of the villages and people.

houses, more like to great towns than villages, and twenty-six parish churches, beside those of *Gozo*. The number of fighting men was said to be about 25000, but I believe there are scarce so many, for, according to a survey taken in the year 1632, the whole number of souls upon the island, besides the knights, was about 50112; of which we cannot reckon much above one fifth part to be fighting men. And tho' since that time the number of inhabitants be much increased, yet I think scarce doubled.

The † language of the natives is a corrupt *Arabick*, or *Moresco*, introduced by the *Saracens*, the ancient language, before their coming in, probably having been *Greek*, with a mixture of *Punick*: whence I think one may reasonably conjecture that the *Saracens* did either destroy or drive out the former inhabitants. Howbeit the people can generally speak *Italian*, there being no other language but that and *Latin* used in any of the courts of *Malta*.

The great master of the order is now Prince and supreme governor of the whole island, which with *Gozo* and the adjacent islets, after the loss of *Rhodes*, was granted to this order by the Emperor *Charles V.* in the year 1530. The government is managed with that prudence and justice, that the island is now in a very flourishing condition, the inhabitants enjoying a great deal of freedom and security; being also in their carriage and conversation among themselves, and to strangers, since the coming in of the order, very civil and courteous, however formerly they have been branded for the contrary; so that few subjects live more happily than they do.

The great master when he goeth abroad is attended by many of the knights, and two or three pages, of which he keeps (as we were told) about twenty-four. The knights of the order are always uncovered in the presence of the great master, excepting those sixteen which are of the *Gran Croce*: they take place, of what birth or quality soever they are, according to their se-

† The language.

‡ The great master, Prince of the island,

priority from the time of their admission; so that there is never any difficulty or question about precedency. All the knights are of noble or genteel extraction, none being capable of admission but such as can prove their nobility for three or four descents. The *great master* wears a black short gown with hanging sleeves, the rest of the knights are habited as they please at home, but when they go in *Curso* (as they call it) upon the galleys, they wear the proper habit belonging to their order. The number of knights was said to be between 2000 and 3000, of which, for the most part, reside in the city the major part, except when the galleys are abroad. The name of the great master, at our being there, was *Nicolaus Cottoner* of *Majorca*, and I suppose he is still living, not having since heard of his death.

The names of the *great masters* that have been since the order removed to *Malta*, are as follows:

43. *Frater Philippus de Villiers Lisleadam*, a *Frenchman*, who brought the religion into *Malta*, Anno 1530, being the forty-third *great master* from the first institution of the order. He died August 21, 1534.

44. *Fr. Petrinus del Ponte*, an *Italian*, the first that was chosen *great master* in *Malta* August 26, 1534. He died November 17, 1535.

45. *Fr. Desiderius di Tolono Santaialla*, of *Daulphiny*, chosen in his absence November 22, 1535. He died Sept. 26, 1536, being on his way coming towards *Malta*, at *Montpellier*.

46. *Fr. Joannes D'omedes*, an *Aragonian*, elected Octob. 20, 1536, died Sept. 6, 1553.

47. *Fr. Claudius della Sengle*, a *Frenchman*, chosen while he was ambassador for the order at *Rome*, Sept. 11, 1553. He died Aug. 18, 1557.

48. *Fr. Joannes di Valetta*, a *Gascoigner*, elected Aug. 21, 1557. died Aug. 21, 1568. In his time *Malta* was invaded, and the city besieged by the *Turks*, who were notably repulsed.

49. *Fr. Petrus de Monte*, an *Italian*, elected Aug. 23, 1568, died Jan. 27, 1572.

50. *Fr. Joannes L'evesque de la Cassiere*, an *Auvergnian*, elected Jan. 30, 1572, died in *Rome*, Decemb. 21, 1581.

51. *Fr. Hugo Loubenx Verdalle*, a *Gascoigner*, afterwards made cardinal, elected *Jan. 12, 1581*, died *May 4, 1595*.

52. *Fr. Martinus Garzes*, an *Aragonian*, elected *May 8, 1595*, died *Feb. 7, 1601*.

53. *Fr. Aloysius de Wignacourt*, a *Frenchman*, elected *Feb. 10, 1601*, died *Sept. 14, 1622*.

54. *Fr. Lewis Mendez de Vasconcelos*, a *Portuguese*, chosen *Sept. 17, 1622*, died *March 7, 1623*.

55. *Fr. Antonius de Paula*, a *Gascoigner*, chosen *Mar. 10, 1623*, died *June 9, 1636*.

56. *Fr. Joannes Paulus Lascaris de Castellar* of *Nizza*, elected *June 11, 1636*. He was living in the year 1647, when *Malta illustrata* was publish'd; and to him succeeded

57. *Fr. Martinus de Redin*, a *Spaniard*, in the year 1657.

58. *Fr. Gassant de Clermont* of *Dauphiny*, in the year 1659, and died in the same year.

59. *Raphael de Cotoner* of *Majorea*, who died in the year 1663; he was brother to the present grand master.

Gozo.

About five miles distant from *Malta* westward, lies the island *Gozo*, called by the ancients *Gaulos*, twelve miles long, six and a half broad, and about thirty in circuit. The soil like that of *Sicily*, very deep and fruitful of wheat and other grain. This island is mountainous, yet all cultivated, furnished with store of fresh springs. It maintains upon it 3000 persons, the number of houses being about 500. It was much more populous before the *Turkish Armata* most inhumanly wasted it, in the year 1565, carrying away prisoners 6000 persons.

In the streight betwixt *Malta* and *Gozo*, lies a little island called *Comino*, anciently, according to *Chroerius*, *Hephæstia*, about five miles in compass, and well cultivated; for the defence whereof, the great master *Wignacourt* caused a fort to be built, opposite to that on the other side the streight in *Gozo*, to secure the streight, and hinder any vessels passing between the islands without leave.

That

That there is great plenty of shells and fish-bones petrified found in *Malta*, I have already intimated. I shall now therefore only name those which are not at all, or but rarely found with us in *England*.

1. * *Glossopetræ*, which are nothing else but sharks teeth, of several shapes and sizes. These the *Maltese* call *serpents tongues*. 2. The vertebres of thornbacks and other cartilaginous fishes. 3. *Cats heads* (as they call them, from their likeness to a little skull.) 4. *Serpents eyes*, of several figures and colours. The most of them red and like to those they call *toadstones*; the exterior superficies being a segment of a spherical, and shining as if it were polish'd, so that they are commonly set in rings. I have seen great lumps or masses of these cemented together. That the † *toadstone* is nothing else but the jaw-tooth of a fish, called *Lupus marinus* by *Schonfeldius*, Dr. *Merret*, in his *Pinax*, hath first published to the world; and I doubt not but these have the same, or like original. 5. *Serpents teeth*, which are small, oblong, striate stones of a polite superficies, but no certain figure. Whither to refer these as yet, I know not, as neither 6. those they call *serpents eggs*, which are somewhat like the former, but not striate with lines. 7. *Bastons of St. Paul* [*Baculi S. Pauli*] having the resemblance of small snagged sticks. 8. *Petrified lentils*, because for colour, figure, and magnitude, somewhat like to that pulse. Besides, I found, among the stones I bought there, some exactly figured like the fore teeth of a man; and doubtless many other sorts by diligent search might be found, which have not as yet been named or taken notice of.

As for plants I found here very few sorts, but what I had before observed in *Italy* and *Sicily*, viz. *Cucumis aspinus*; *Hypericum tomentosum*; *Consolida regalis peregrina parvo flore* J. B. *Carduus lacteus peregrinus* Cam. There are but few trees growing upon the island, the greatest want they have, being of fewel, to supply which defect, they have of late begun to make use of

* The petrified shells in *Malta*, &c.

† What the *toadstone*, so called, is,

sea-wreck to burn in their ovens, prepared after a certain manner, invented by a peasant of *Malta*, for which he is highly commended by *Abela*, as a great benefactor to his country.

Here I first noted the custom of flitting up the nostrils of asses; because they, being naturally strait or small, suffice not to admit air enough to serve them when they travel or labour hard in these hot countries. For the hotter the country is, the more air is necessary for respiration and refreshment of the body; there being less of that *menstruum* which serves to nourish or continue fire, and consequently the vital heat of animals (which hath great likeness thereto) in hot air than in cold; whence we see that fire burns furiously in cold weather, and but faintly in hot. Whether it be because the air is thinner in hot weather and hot countries, or because the reflected sun-beams spend and consume a good part of the forementioned *menstruum*, or from both these causes. That the air is thinner, and consequently the *menstruum* also more diffused in hot weather, is clear in experience. I need mention no other experiment to demonstrate it, than the air inclosed in the shank of an ordinary weather-glass, which in hot weather dilates itself, and in cold contracts very considerably. So then to give an account of the raging of fire in the coldest weather, we need not have recourse to the insignificant term of *Antiperistasis*; the true reason thereof being the density of the ambient and contiguous air containing plenty of that *menstruum* which nourishes the fire.

I omitted to mention the ancient *Cæmeteria*, or subterraneous burying-places called *Catacumbe*, of which there be many in *Malta*, because of these we have already had occasion to discourse in our description of *Syracusa* in *Sicily*.

That this island produces or nourishes no serpent or other venomous creature, the common people affirm; but because I find no mention hereof in *Abela*, I give little credit to their report: should it be true, it would be to me a great argument that this was not the island upon which *St. Paul* was cast when he suffered shipwreck, but rather that *Melita* before mentioned upon the coast of *Dalmatia*,

Dalmatia, for which there is also some ground in the scripture, which saith *Acts* xxvii. 26.

For that *St. Paul* upon the viper's fastening on his hand did by his prayers obtain of God, that all the serpents in *Malta* should be turned into stones, and the island for the future wholly free from all venomous beasts, is a Monkish fancy, grounded upon the forementioned petrified fish-bones, which they fondly imagined were sometime parts of serpents: whereas in other places where plenty of such stones are found there is no lack of serpents. I confess it is difficult to imagine how serpents should come at first to breed here, if the whole island were once (as we conceive) a submarine rock covered with the sea; and there be no spontaneous generation of animals, as we also believe: because it can scarce be imagined that any man should on purpose bring over serpents hither, unless perchance to shew them for a curiosity. Whether there be venomous beasts or no I am sure there are venomous insects here, the very biting or stinging of the gnats (with which the city is much infested) being more virulent than in other places. For my part I do not remember that in *England* the biting of a gnat did ever cause a swelling, or leave a mark behind it in the skin of my face (though I know in some it doth) but there it both raised a swelling, and left a mark behind it that was not out for a month after. The *Maltese* easily defend themselves from the annoyance and bitings of this insect, keeping them out of their beds by large linnen curtains lapping over one another. At first we were not aware of the trouble these animals were like to give us, and left our curtains open.

From *Malta* we returned the same way to *Messina*; staying a day at *Catania*; where we hired horses and took a soldier to guide us up mount *Ætna*, now called *Mon-Ghibello*. The top of which at *Catania* was told us to be 30 miles distant. We ascended for the most part all along from *Catania*, and we found the ground rich, and well cultivated, and the country well inhabited; for the slag and cinders cast out of the mountain, being in process of time dissolved by the weather, doth mightily fatten and enrich the soil. We rode up so high till we came to the conservatories of snow; and seeing the moun-

Mount
Ætna.

tain

tain above us all covered with snow, we did not, nor indeed could we ascend any higher. The trees hereabout had at this time scarce put out their leaves. As we went up we found in one place the ground cover'd for a quarter of a mile broad, and four or five miles in length, with cinders, which had been thrown forth by the mountain, and was certainly the relique of a huge stream of melted coals, iron, stones, and sulphur poured out in the time of the last eruption, nothing as yet growing among these stones and cinders. This mountain hath in former times thrown forth stones and slag as far as *Catania* itself, as we could manifestly see; but of all the eruptions that ever were I believe this last which happen'd [*Anno* 1669.] since our being there, was the greatest and most horrid; for a full description and exact account whereof I refer the reader to *Borellus's* learned treatise *De Incendiis Ætnæ*. This mountain is of a very great height, and we were told by credible persons, that one might see it at sea over the whole island any way one came thither. We could clearly discern the top of it as far as the island of *Malta*, which, in a right line, must needs be at least 100 miles distant. One thing we could not but wonder at, that there should be a ring of snow about the top of *Ætna*, but the highest top itself bare, without any snow upon it.

Observations about the inhabitants and customs of *Sicily*.

The inhabitants of *Sicily* are noted for churlish and uncivil to strangers, and I think not undeservedly. The *Italians* have a proverb, *Omnes insulani mali, Siciliani autem pessimi*. All islanders are bad, but the *Sicilians* worst of all. This island is confessedly a very ill place to travel in, by reason of the robbers and *Banditti* wherewith it is infested, thanks to the good government, which takes no more care to cleanse it of such vermin. These bandits will not be content with your money, but will also seize your person, and detain you prisoner in the mountains till you give them a good ransom for your deliverance.

We took notice of some laws and customs, proper to *Sicily*, during our stay here.

1. It is unlawful to carry out of this island in money more than ten crowns a person; if any one carries out more and be taken, all is forfeited. But the searchers are not

not so strict, but that if you give them a little money they will let you pass, especially if you be a stranger and traveller, without any searching at all.

2. It is unlawful to kill any calves in this island, so that no veal can be procured here. And yet at *Malta* they have veal enough, transported hence by stealth.

3. It is unlawful to take above one ounce of silver without weighing of it; so that if you buy any thing which comes to more, though your money be never so good, you shall see them *pro forma* put it in their scales.

4. No person under age [*imberbis Juvenis*] may be received at any time in *Sicily*, unless he hath a patent and license to travel.

5. It is prohibited under pain of death to any man to carry pistols about him; but long guns they may and do all carry. The reason is because a pistol may easily be hid, and so men murdered unawares.

6. All the money current in *Sicily* is coined at *Messina*.

After our return to *Messina*, May 27. We passed by *Rhegium*, boat over the *Fretum* to see *Rhegio* or *Rhezo*, ancient-^{now} *Rhe-ly Regium*, an old city, but now very mean and poor.^{20.} All they have to boast of at present is their gardens well stored with all sorts of the best fruits; their silk, of which plenty is made here and (if we may believe themselves) the best in *Italy* or *Sicily*: and St. Paul's pillar which burned, of which they have but a small fragment remaining. They told us many stories and legends of it, which we gave little heed to.

We took boat and went as far as *Scylla*, to see the *May 29.* fishing of the *Pesce Spada* or sword-fish. The man-^{The man-}ner whereof is thus. On the top of cliffs by the sea-^{ner of} side stand *Speculatores* (*Huers* our fisher-men call them) catching to espy the fish, who so soon as they see them, either ^{the sword-}by voice if they be near, or by known signs if at dis-^{fish.}tance, give notice to the fishing-boats whereabouts the fish are. The boat presently makes towards the place; then one gets up to the top of a little mast in the boat, made with steps on purpose, and there stands to observe the motion of the fish and direct the rowers, who accordingly ply their oars. When they are come very near one, he upon the mast comes down, and taking the

the harping iron in his hand, if he can, strikes it into him. The fish, being wounded, plays up and down and wearies himself, and when he is faint and spent they draw him up into the boat: this is much like the whale-fishing. The harping iron is put on a staff or pole of wood. The point of it is sharp and hath beards on each side like a barbed arrow, so jointed that if you hold the point upward they clap close to the shaft, if downward they fall off from it on each side, so that they resist not the going in of the iron but only the drawing out. This fish is held a great dainty by the *Messanese*, as much longed for and as greedily bought up by them as *Soland* geese by the *Scots*; sold in *Messina* at first coming in for six pence *English* the pound. In *May* and the beginning of *June* it is taken on the coast of *Calabria*; about the latter end of *June* it comes over to the *Sicilian* side, and is taken about the *Faro* till *August*. There, because there be no rocks or cliffs hanging over the sea, they prepare a large boat or brigandine, and pitch up in it a tall mast with shrouds like the mast of a ship, on the top of which the *Speculator* or huer stands.

In the beginning of *June* yearly is celebrated at *Messina* a great festival called the feast of our Lady of the letter: it continues near a week's time with great solemnity. During this time all the house-keepers hang out in all the streets a multitude of lamps, candles, and tapers, and set their windows as full of lights in paper-lanterns as they can hold, which burn all night, so that the streets are as lightsome almost by night as by day. Nay, the light was so great, that at a good distance from the town, as we came thither late at night, the reflexion thereof from the clouds and atmosphere appeared to us like the *Aurora* or *Crepusculum*, though we saw not the lights themselves, and it was no dark night, the moon as I remember shining. They call it the feast of our Lady of the letter, because it is held in memory of a letter written to them (as they say) by the *Virgin Mary*, which how sorry and ungrounded a fiction it is, the pretended letter itself (of which also they confess them-

selves

selfes not to have the *Greek* original, but only a *Latin* copy) will best demonstrate to any not grossly stupid reader. It runs thus.

Maria virgo Joachim filia Dei humillima, Christi Jesu crucifixi mater, ex tribu Juda, stirpe David Messianensibus omnibus salutem & Dei patris omnipotentis benedictionem.

Vos omnes fide magna legatos ac nuncios per publicum documentum ad nos misisse constat: Filium nostrum Dei genitum Deum & hominem esse fatemini; & in cœlum post suam resurrectionem ascendisse, Pauli Apostoli electi prædicatione mediante viam veritatis agnoscentes. Ob quod vos & ipsam civitatem benedicimus, cujus perpetuam protectricem nos esse volumus. Anno Filii nostri XII. Indict. I. III Nonas Junii, Luna XXVII, Feria V. Ex Hierosolymis Maria virgo quæ supra hoc chirographum approbavit.

We departed from *Messina*, taking a *Felucca* for *Na-* June 6.
ples. The first night we lodged at *Tropia*, a small town *Tropia*.
in *Calabria* about 60 miles distant from *Messina*. Here
we observed growing on the rocks near the town *Zizyphus* sive *Jujuba sylvest.* Park. *Conyza minor vera* Ger.
Androsæmum foetidum Park. i. e. *Tragium*; besides many
others which we had before found in *Sicily*.

The second night we lay at *St. Lucido*, where we
also observed the wild *Jujube*.

7.
St. Lucido.

The third night we lay at *Porto Nicolo*, a little creek
or cove not far from *Scalea*, where there is a small castle. *Scalea*.
Here and at *Scalea* we observed the common *Cypress*
tree; *Lamium peregrinum* sive *Scutellaria* C. B. *Rosmarinum vulgare*, quod in toto hoc litore in rupibus copiose
provenit: *Sabina baccifera*, called also *Cedrus Lycia retusa* Bellonii; *Chondrilla rara purpurea*, *Crupina Belgarum dicta* Park. *Meum alterum italicum* quibusdam J. B.
Caryophyllus maximus ruber; the largest and fairest flower'd wild *Pink* or *July-flower*, which I have any where
seen, on the rocks at *Scalea*; *Caryophyllus gramineo folio minimus*; a sort of small *Scorzonera*, or *Goat's-beard*,
Facea incana, tenuiter laciniata, capitulis *Facea nigra*
vulga-

vulgaris; *Valeriana quædam supina serpyllifolia*, n. d. This was afterward shewed us dried by *Joan. Maria Ferro*, an apothecary in *Venice*, to whom it was sent by the name of *Perichlymenum*: *Myrtus communis Italica* C. B. *Auricula ursi*; which we wonder'd to find here upon the rocks, being an *Alpine* plant, and which delights in colder places. *Casia poetica* Lob. Not to mention *Ferrum equinum filiqua singulari* C. B. *Acanthium Illyricum*; *Polium montanum album* C. B. and some sorts of *Securidaca*, common elsewhere in *Italy*. Here also I first found that species of *Campanula*, which I have denominated *minor, folio rotundo, flore cæruleo pentagono grandi*. It hath a leaf like to the common *Campanula minor rotundifolia*, sometimes rough and hairy, sometimes smooth. *Agnus castus* in toto hoc litore in arenosis frequentissimus est.

9.

10.

Salerno.

The fourth night at a little place call'd *Chiupo*.

We lodg'd at *Salerno*, where we quitted our boat, and staid one day. *Salerno*, tho' the see of an archbishoprick, is at present but a mean city, having narrow streets. Whatever there hath been formerly, there is now neither university nor *Schola illustris* in it, that we could hear of: scarce any footsteps of the old school remaining. In the cathedral church dedicated to *St. Matthew*, we observed the monuments of the famous *Hildebrand*, *Helbrand* the Germans call him, the great introducer of the celibate of priests, and opposer of the Emperor, called *Pope Gregory the VII*. In the porch before the church lie many ancient *Roman* grave-stones, with inscriptions. As for plants we here noted, *Barba Jovis frutex*, on the rocks plentifully; *Satureia durior* J. B. *Laurus Tinus cærulea bacca* Lob. *Cytisus glaber filiqua lata* J. B. on the rocks, which plant it was not my hap to meet withal growing wild any where else beyond the seas: *Colutea minima sive Coronilla* Ger. *Melissa sylvestris hirsutior & minus odorata*; *Echium majus & asperius flore albo* C. B. *Thlaspi Candia* Ger. *Lamium peregrinum sive Scutellaria*; *Sorbus domestica* Lob. *Peucedani facie pusilla planta* Lob. *Lotus arbor*; *Staphylodendron*; *Colus Jovis*; Besides these many before set down, found in *Sicily* and other parts of *Italy*, viz. *Antirrhinum majus purpureum*; *Lentiscus*; *Alaternus*; *Coryza major Monspeliensis odorata*

Plants observed about Salerno.

odorata J. B. *Ricinus* five *Palma Christi*; *Scrophularia Ruta canina* dicta; *Stoechas citrina angustifolia*; *Genista Hispanica*; *Tithymalus arboreus* Park. *Valeriana rubra* Dod. *Ilex arborea* J. B. *Capparis*; *Scorpioides Bupleuri folio*; *Chrysanthemum Bellidis folio* Hort. Pat. *Teucrium majus vulgare* Park. *Colutea scorpioides*; *Chrysocome capitulis conglobatis* Ger. *Caprificus*; *Trifolium bituminosum*; *Mium alterum Italicum*; *Cyclamen hederæ folio*; *Periclymenum perfoliatum calidarum regionum* Lob. *Anagyris foetida*; *Smilax aspera*; *Asparagus sylvestris* five *Corruda*; *Acanthus sativus*; *Dorycnium Monspeffulanum fruticosum* J. B. *Trifolium album rectum hirsutum valde* J. B. *Telephium scorpioides* Ang. Lob. *Martagon Chymistarum* Lob. *Geranium Romanum versicolor* five *striatum* Park. Monte Angelo, a mountain near this town, is a place noted for for variety of plants, but we had not time to search it.

From Salerno we travell'd by land to Naples, passing through *La Cava*, a pretty town, having portico's on each side the streets; and *Nocera*, both episcopal sees; *Scafata*; *Torre d'Annunciata*; *Torre di Greco*, considerable burghs.

12.

We returned back from Naples to Leghorn by water, baulking Rome for the present, being deterr'd from going thither by the general vogue in Italy, that in the summer months, and, till the rains fall, it is very dangerous for him that is in Rome to go out thence, or him that is out to enter in there.

30.

The first night we reach'd no further than *Nisita*, a little island in the mouth of the bay of *Pozzuolo*, about five miles distant from Naples.

The second day we proceeded as far as *Sperlonga*, a little short of *Terracina*, anciently *Anxur*, about sixty miles.

The third day we passed by *Monte Circello*, or the *Promontorium Circeium*, where the famous enchantress *Circe* is reported to have dwelt. This promontory stands out a great way into the sea, so that at a distance we took it for an island. As we were just over-against the utmost point of it, we observ'd a great number of insects very like to *Cicadae*, and which we have not elsewhere seen, flying about in the air. Our boatmen called them *Gronge*. Divers of them we caught in our

Cicada.

boat ; and yet we were at least two leagues distant from land. Possibly they might fly out a great way further to sea ; for what reason we cannot easily imagine ; perhaps only to sport themselves in the sun. Howbeit we do not remember to have seen any other land-insect falling out so far from land. And now that we have made mention of the *Cicada*, it may not be amiss, by the way, to take notice of a common error committed in our *English* schools, in translating or rendering this word *Cicada* in *English* by *Grashopper*, whereas a *Cicada* is a much different insect, of a rounder and shorter body, that sits commonly upon trees, and makes a noise five times five times louder than a *Grashopper*, whose true name in *Latin* is *Locusta*, and not *Cicada*. Of these *Cicadae* there are great numbers in the hot countries, but none on this side the *Alps* and *Cevennois*. This night night we lodged at *Astura*, where yet remain some ruins of an ancient town, and the foundations of some buildings in the water.

Antio.

Not far from hence, the fourth day, we passed the new town of *Antio*, and about a mile distant great ruins of the old town, and of a great mole for the haven ; and this night lodg'd at a little tower called *St. Michael*, near the mouth of the river *Tiber*, not far from *Ostia*.

The 5th day we had a favourable gale of wind, which brought us to a little place called *St. Stefano*, not far from *Orbetello*. This day we passed in sight of *Civita Vecchia* and *Porto Hercole*, compassing *Monte Argentaro*.

The 6th day there happen'd a great *Bore* (as they term it) that is, a storm of thunder, lightening, and rain, accompanied with a violent wind, which continued all the forenoon ; in the afternoon we rowed about 18 or 20 miles, and put in to a little cove or harbour under a tower called *Calo di Furno*. On the sea-shore hereabout we found those *opercula concharum*, which some naturalists make to be stones, and call *Umbilici marini*. The *Italians* call them *St. Lucy's eyes*.

The 7th day we proceeded as far as the island *Troia*, when, the wind being contrary, we were forced to take up at a little harbour under the shelter of a small tower called *Lo Molino*.

The

The 8th day we passed *Piombino*, a walled town which hath a Prince of its own, *Populonia P. Barreto*, *St. Vincentio*, *Castagneto*, and *Vada*, and lodged at a tower called *Castiglione*.

The 9th day it having blown hard all night, notwithstanding there was no wind stirring in the morning, we found the sea very rough, yet, through the good providence of God, we got safe into *Leghorn* about noon.

The plants we took more especial notice of in this voyage were, *Rosmarinum vulgare*; *Cedrus Lycia folio retuso* Bellonii; *Barba Jovis frutex*, on the rocks and cliffs by the sea-side in many places: *Cruciata marina*, on the sands at *Astura* plentifully: *Thlaspi capsulis sublongis incanum* J. B. *ibid.* *Cichorium verrucarium sive Zacynta*, at the mouth of *Tiber*, and about *St. Stefano*, plentifully: *Lotus siliquosa lutea Monspeliensis* J. B. besides another sort of *Lotus*, with a longer and slenderer cod: *Aristolochia clematidis*; A semper-virent shrub with a leaf like *Oleander*; *Terebinthus*; *Paliurus*; *Thlaspi biscutatum*; *Ambrosia vulgaris*; which it was not our hap to meet with elsewhere in all our travels; *Cirsii quædam species* quæ jam defloruerat, at *St. Stefano*: *Chamærrhiphes sive Palma humilis* about *Orbetello* and elsewhere on the cliffs of *Etruria*: *Draba quædam siliquosa foliis longis angustis incanis*; *Euphrasia pratensis lutea*; *Phillyrea angustifolia*, in montosis propè maris litus in toto hoc tractu frequentissima; *Phillyrea serrata* 2 Clus. *Colutea minima sive Coronilla* Ger. In rupibus maritimis propè turrin *Castiglione*.



OF

FLORENCE.

Florence. FROM Leghorn we travelled through Pisa to Florence, a city which answers its name and epithet *Fiorenza la Bella, Florence the fair*. Yet for beauty in my opinion it must give place to *Antwerp* and some other cities in the *Low Countries*, only it excels them in multitude of large stone-palaces, scattered up and down the streets, such as are those of the *Grand Duke* both the old and the new called the *Palazzo de Pitti*, because purchased of them; of the *Strozzi*, the *Salviati*, &c. Many of the streets are streight, which adds no little to the beauty of them. They are all paved with great broad stones, like *Luca* or *Collen* in *Germany*: yet but narrow as in many other towns of *Italy* and *Gallia Narbonensis* to keep off the scorching beams of the sun in summer time, which reflected from these broad stones would else make them more than sufficiently hot. The paper-windows, and they too for the most part broken and tattered, do very much disgrace the fair stone-houses. The river *Arno* divides this city into two parts, which are joined together by 4 fair stone bridges; one of which, called *Ponte vecchio* or the old bridge, hath on each side of it a row of goldsmiths-shops. All of them, but especially the two middlemost, are remarkable for the breadth and flatness of their arches. The circuit of the walls is said to be 6 *Italian* miles: but therein is comprehended a great deal of waste ground, [I mean not filled up with buildings] the gardens and walls of the *Great Dukes's* palace being at least a mile in compass; besides, on the other side the river, are some hundreds of acres of land taken up in vineyards and gardens belonging to private persons, The number of parishes

rishes taking in the 12 priorates is 44, the number of inhabitants according to *Schottus* 85000 souls, and I believe he exceeds in his account, though some make them 90000, and others 100000. There are an incredible number of nunneries: *Schottus* saith 54; we were told 56; whereas there are but 24 monasteries of friars. But that which is most strange is the multitude of hospitals and alms-houses, of which there are said to be 37; one of which, *viz.* the *Orphanotrophium* maintains 900 persons, and hath 70000 crowns yearly revenue.

This city is of no great strength, being encompassed only with an old-fashioned wall: but the *Great Duke* hath three castles or citadels in it, I think rather to bridle than defend it; one on the south-side, held by a good garrison, neatly kept and diligently watch'd, wherein are laid up arms for 30000 men. Another is a small fortress in the *Great Duke's* garden, to which he may retire in case of any sudden danger or exigent: here they say his treasure, or a good part of it, is kept. The third we viewed not.

The churches in *Florence*, tho' they be not so richly Churches gilded as some we have seen, yet, for their architecture, in *Florence*, they excel most, especially the *Domo*, or church of St. The *Domo Maria Florida*, which, in some mens opinion, is the or cathedral compleatest structure that ever was set upon the earth. The pilasters that support the *nave* or body of the church stand at so great a distance, and are withal so very slender, that they do not obscure the isles, but at one view you enjoy the whole church. Besides the *cupola*, tho' the first and pattern of all the rest, is the largest and and tallest of any in *Italy*, excepting that of St. *Peter's* in *Rome*: under which is the choir, of an octagonal figure. The walls of this church are crufted over on the outside with marble of several colours, cut into small pieces and variously chequer'd; which, though the *Italians* now despise and count but a toy, yet makes a pretty gaudy shew. Within this church, beyond the the choir, are four inscriptions; one concerns the building of the church, and is as follows.

Inscriptions.

I.

Anno à Christi ortu 1280 Florentini magnis divitiis par-
tis, & rebus domi forisque commode constitutis cum
urbem mœnibus auxissent, pulcherrimisque ædificiis
publicè decorassent, ut Rem Divinam quoque optimè
ordinarent, & posteris insignis magnificentiæ ac Re-
ligionis suæ exemplum proderent, hoc augustissimum
templum in Dei honorem ejusque matris semper Virgi-
nis Mariæ instituerunt, & Pontificio Legato Car-
dinale præsente, primùmque lapidem ponente summa
cum omnium lætitia ac devotione inchoârunt VI. Id.
Septembris.

The second concerns the dedication or consecration of
this church by Pope *Eugenius IV.*, and runs thus.

2. Ob insignem magnificentiam Civitatis & Templi *Eugenius*
PP. IIII. omni solennitate adhibita dedicavit 25
Martii 1436. Cujus dedicationis gratiâ Pons lig-
neus insigni magnificentiâ & ornutu factus est ab
Ecclesia Sanctæ Mariæ Novellæ ubi PP. inhabita-
bat usque ad hanc *Ecclesiam*, &c.

The third concerns the union of the Greek and Roman
churches in these words,

3. Ad perpetuam rei memoriam;
Generali Concilio Florentiæ celebrato post longas disputa-
tiones unio Græcorum facta est in hac ipsa Eccle-
sia, Die 6 Julii 1438. Præsidente eidem Concilio
Eugenio Papa IV cum Latinis Episcopis & Prælati-
s, & Imperatore Constantinopolitano cum Episcopis &
Prælati & Proceribus Græcorum in copioso numero,
sublatisque erroribus in unam eandemque rectam fidem
quam Romana tenet Ecclesia consenserunt.

4. The fourth concerns the translation or removal of the
body of *Zenobius* from the church of *S. Laurence* hither
by archbishop *Andreas* his successor.

Some monuments also I observed in this church; the in-
scriptions whereof they being of considerable persons it
may not be amiss here to set down. Of *Marsilius Ficinus*,

En

*En hospes ! hic est Marsilius Sophiæ pater :
 Platonicum qui dogma culpâ temporum
 Situ obrutum illustrans, & Atticum decus
 Servans, Latio dedit ; fores primus sacras
 Divinæ aperiens mentis, actus numine,
 Vixit beatus ante Cosmi munere
 Laurique Medicis, nunc revixit publico.
 S. P. Q. F. MDXXI.*

Of *Fottus* a good architect, and the first reviver of painting in *Italy* ; though *Vassari* in his lives of painters makes *Cimabue* to have been the first reviver, and to have taught *Giotto* and others. The verses of his epitaph were made by *Ang. Politian*, and are as follows.

*Ille ego sum per quem Pictura extincta revixit ;
 Cui quàm recta manus tam fuit & facilis.
 Naturæ deerat nostræ quod defuit arti ;
 Plus nulli licuit pingere nec melius.
 Miraris turrim egregiam sacro ære sonantem :
 Hæc quoque de modulo crevit ad astra meo.
 Denique sum Fottus, quid opus fuit ista referre ?
 Hoc nomen longi carminis instar erit.*

Obiit Anno 1336. Conciues posuere B. M. 1490.

Of *Philippo Brunelleschi*, a famous architect, who designed the cupola of this church, and also that of *St. Laurence's*,

D. S.

*Quantum Philippus Architectus arte Dædalea valuerit
 cum hujus celeberrimi templi mira testudo, tum plures
 machinæ divino ingenio ab eo adinventæ documento
 esse possunt. Quapropter ob eximias animi sui dotes
 singularesque virtutes XV. Kal. Maias 1446. ejus
 B. M. corpus in hac humo supposita grata Patria
 sepeliri jussit.*

In

In this church on the north wall is the picture of an *Englifr* knight on horseback; *Joannes Acutus* they write him, and therefore some think that his name was Sir *John Sharp*; I incline rather to their opinion who suppose his name to have been Sir *John Hawkwood*, especially seeing *Guicciardine* writes him *Acutus* and not *Acutus*. Whatever his name were he was a valiant man and an eminent captain.

Here is also a painted table hung up in memory of *Dante*, the famous *Italian* poet, who was native of this city, but lived in exile and was buried at *Ravenna*. On the frame of this table are these verses inscribed,

*Qui cœlum cecinit mediumque inumque tribunal,
Lustravitque animo cuncta poeta suo,
Doctus adest Dantes, sua quem Florentia sæpe
Sensit consiliis ac pietate patrem.
Nil potuit tamò mors sæva nocere poetæ,
Quem vivum virtus, carmen, imago facit.*

The church of *Santa Croce* is the monument of *Michael Angelo Buonarota*, the famous architect, sculptor, and painter. Above stands his effigies; and under that is a coffin, and under the coffin three statues sitting of rare workmanship, worth their weight in silver, which signify painting, sculpture, and architecture. Below this inscription,

*Michaeli Angelo Bonarotio,
E vetusta Simoniorum familia,
Sculptori, Pictori & Architecto,
Famâ omnibus notissimo.*

*Leonardus patruo amantissimo & de se optimè merito
translatis Româ ejus ossibus, atque in hoc templo
Major. suor. Sepulchro conditis, cohortante Sereniss.
Cosmo Med. Magno Etruriæ Duce P. C. Anno
Sal. MD LXX.*

The church of the *Annunciata* besides several others is the monument of *John Bologna*, a man well known in the *Annun-Italy*. It stands in a chapel behind the choir built by *himself*, and is thus inscribed,

Johannes

*Johannes Bologna Belga, Medicorum PPum nobilis
alumnus, Picturâ, Sculpturâ & Architecturâ clarus,
virtute notus, moribus & Pietate insignis Sacellum
Deo, Sep. sibi cunctisque Belgis earundem artium
cultoribus P. An. Dom. 1613 13 16.*

In the church of *St. Mark* is a small monument for a The
great person. viz. *Joannes Pius Mirandulanus*, with church of
this inscription, *St. Mark.*

*Johannes jacet hic Mirandula, cætera narunt
Et Tagus & Ganges, forsan & Antipodes.
Ob. An. Sal. MCCCCLXXXIII, vixit An. XXXII.*

*Hieronymus Benivenius, nè disjunctus post mortem locus
ossa separet quorum animos in vita conjunxit amor,
hæc humo supposita poni curavit.
Ob. An. MDXXXII. vixit An. LXXXIX. Men. VI.*

In the cloister of *St. Laurence* by the church door is
the monument of *Paulus Jovius* thus inscribed,

*Paulo Jovio Novocomensi Episc. Nucerinæ
Historiarum sui temporis Scriptori
Sepulchrum quod sibi testamento decreverat
Posterius ejus integra fide posuerunt;
Indulgentia maximorum optimorumque Cosmi
Et Francisci Etruriæ Ducum.
Anno MDLXXIII.*

In the *Baptisterium* or church of *St. John*, supposed to
have been anciently a temple of *Mars*; of an octagonal
figure, and having three pair of brass doors artificially cast
or engraven with curious figures in *metzo relievo*, is a fair
monument of Pope *John XXIII.* who was deposed
in the council of *Constance*, with this inscription,

*Johannes quondam Papa XXIII^{us} obiit Florentiæ Anno
Domini MCCCXVIII. XI. Kalendas Januarii.*

In

St. Laurence's church.
The chapel of St. Laurence.

In the church of St. Laurence are interred several of the *Great Duke's* family. And to this church belongs the famous chapel of St. Lorenzo, built by the *Great Dukes*, which, when finish'd, is like to be, for its bigness, the most sumptuous, rich, and magnificent structure in the world. This chapel is of an octagonal figure, and the roof of it a large *cupola*. The inside of it is incrusted over with several sorts of precious stones, I may call them, for they are all above the rate of marble, viz. jasper of several kinds and colours, agate, *Lapis Lazuli*, touchstone, &c. all polish'd and resplendent, inlaid and wrought into various figures. Of this octagon one side is left void for the high altar, for which there is a sumptuous tabernacle preparing, that now stands in the *Great Duke's* gallery. The side opposite to the altar is for the door. On the rest of the sides are to be placed statues and monuments for such as have been *Great Dukes*. The first, beginning on the left hand as you enter in, intended (as we conjectured) for *Alexander*, who was only Duke of *Florence*, is not yet made up. The rest have on the top the names, and underneath, in a nich, the effigies of the *Great Dukes*, some in stone, and some in brass, under that a coffin or cushion with a ducal crown lying upon it, and nethermost an inscription in this order,

Franciscus Mag. Dux Etruriæ II, vixit ann. XLVI. ob. XIX Octob. CIJLXXVII.

Cosmus Mag. Dux Etr. I, vixit ann. LV. ob. XI Kal. Maii CIJLXXIII.

Ferdinandus Mag. Dux Etr. III. vixit ann. LX. ob. VII Id. Febr. CIJLXCIX.

Cosmus Magn. Dux Etr. IV. vixit. ann. XXX. obiit XXVIII Febr. CIJLCCXX.

So there is one side more remaining for *Ferdinand II.* the fifth *Great Duke*, who is dead since our being there; the present *Great Duke's* name being *Cosmus III.*

Between the monuments of Duke and Duke are the arms of two of the cities subject to the *Great Duke*, the names whereof are these, *Monte Pulciano*, *Borgo San Sepolchro*, *Cortona*, *Volterra*, *Arezzo*, *Pistoia*, *Pisa*, *Florence*,

rence, Fiesole, Siena, Grossetto, Massa, Montalce, Suana, Chiusa, Pientia, all episcopal sees: besides which, in Tuscany are many considerable towns, castles, and fortresses.

I shall enlarge no farther concerning the churches, towers, pillars, fountains, statues of brass and stone, and pictures, of which there are a great number in this city, and of excellent workmanship: only I cannot omit to mention two *Statuæ equestres* in brass, much greater than the life; one of *Cosmus I.* upon the great piazza: the other of *Ferdinand I.* in the piazza of the *Annunciata*, erected by *Ferdinand II.*

The *Great Duke's* gallery is in the old palace, a handsome pile of building. Under ground, as it were, in cellars, are the stables: above them fair portico's or cloisters to walk in. Above the portico's are shops for all manner of artificers to work in for the *Great Duke*. The uppermost story is the gallery properly so called; where, in an open walk free for any man to come into, stand many ancient, and some also modern statues. Round about on each side this walk, hang the pictures of many Princes and other persons, who have been famous in the world for learning or valour. Among the rest we noted the pictures of *Queen Elizabeth*, *King James*, *Oliver Cromwel*, and *Johannes Acutus*, before remember'd.

The chief rarities are lock'd up in closets, of which we saw four. The things which in our transient view we took more especial notice of were, a huge terrestrial globe, and a *Sphæra armillaris* bigger than that. A branch'd candlestick including many little figures of ivory, or white wax appearing thro' the transparent amber: an engine counterfeiting a perpetual motion, like those of *Septalius* at *Milan*. Several stone-tables, so curiously inlaid with small pieces of precious stones of divers colours, as to compose figures of plants, fruits, and flowers, birds, beasts, and insects, so natural and to the life, that scarce any picture drawn by the hand can excel them. One of these, the best and richest that we have any where seen, both for the excellency of the workmanship, and costliness of the materials, being set with many rubies and pearls, they valued at 100000 *Florence Scudi*, which is more than so many *English* crowns. Several rich cabinets. That of the greatest value, which they rated

at

at 500000 *Scudi*, was rich set with gems of the first magnitude; a pearl of an enormous greatness, but not perfectly round; several topazes almost as big as walnuts, large rubies and emeralds, besides other stones of inferior note, studs of amethyst, &c. Here we also saw the nail, pretended to be one continued body, half iron, half gold, part of the iron having been turned into gold by one *Thurnhauserus*, an alchymist of *Basil*, before-mentioned. To us it seem'd counterfeit, and not neatly neither, the iron and the gold being but bunglingly joined together. A large topaz as big as a pullet's egg. An intire image made of one *Turchois* stone: many ancient *Roman* idols of brass; old *Roman* lamps found in sepulchres, of several fashions: a press full of turn'd work of ivory, very fine and subtile: rhinoceros horns, &c. I omit several pictures and statues wherewith the rooms were adorned, made by the best masters, and much esteemed by those that have judgment in such things.

The armory.

In the armory we saw several remarkables, as the armour of many great persons of *Europe*, among others of *Henry IV.* King of *France*, and *Charles V.* Emperor: *Hannibal's* head-piece (as they called it) it had engraven on it many ancient *Moresco* characters: a suit of *Persian* armour for a man on horse-back, made of little scales of iron. A loadstone, having its poles at the greatest distance I ever saw any: several *Indian* royal vests, made of feathers. Five great swords, such as the Pope uses to bless on *Christmas* day, and send to Princes. A King of *China's* armour made of fish-bones, and a wooden sword. This sure they mistook for an *Indian* King's, the *Chinese* having of a long time had the use both of iron and guns: *Japan* arms and swords without point, and broad at the top. Divers *Turkish* scymitars; *Scanderbeg's* sword: the hair of a horse's mane, seven yards in length; the skin of this horse stuffed up, sent by the Duke of *Lorrain*: several conceited guns: pistols, on whose muzzles were screw'd the heads of halberds, or pole-axes. Nine pistol-barrels so laid on a frame, that by letting down one cock they were all discharged, making eighteen shot, for each is double charged, and a train of powder leads from the touch-hole

hole of the middlemost, to the touch-holes of all the rest, in channels made for that purpose. An engine made like a hat, with several pistols in the crown; this they called the *bona notte*, being to be discharged upon your enemy when you compliment him, and bid him good-night: a long gun, and also a pistol, whose barrels are of beaten gold. Several round hucklers, one with *Medusa's* head painted on it by *Michael Angelo*, an highly esteemed piece. Italian locks for suspected wives: ancient *Balistas* (as they called them) which are no other than great cross-bows. A thong cut out of the hide of a buffalo, 250 yards long. A press full of rich prizes of arms taken from the *Turks*.

In the *Argenteria*, or wardrobe, we saw several presses ^{The *Argenteria* or wardrobe.} or cupboards [twelve in number] full of rich plate. In one, all manner of vessels of beaten gold. In another, a sumptuous altar of the same metal (as they told us) set with diamonds and other precious stones of the highest value. On it was inscribed in great capitals (the letters all made up of rubies) *Cosmus II. Dei gratia magnus Dux Etruriæ ex voto*.

In some by-rooms we saw the skin of a *morffe*, or sea-horse, stuffed; the skin of an *elk* stuffed; the skin and skeleton of an elephant, which was shewn in *Florence* some eight or ten years ago, and died there.

I might spend many words in describing the *Great Duke's* new palace and gardens, stored with great variety of trees and shrubs, valuable for shade, beauty, fruit, or scent; adorned with a multitude of statues thick set up and down the walls and knots: pleasant fountains and water-works; stately and delicious walks both close and open; goodly flowers and choice plants. We took notice of *Dictamnus Creticus*, *Quamoclit Indorum*; *Tragogianum*; *Stramonium peregrinum* Ger. i. e. *pomo spinoso rotundo*; *Pisum cordatum*, *Balsamina cucumerina*, *Chamaeribes*, &c. Here, in an inclosed place were kept two male ostriches, and one female.

In the duke's *Theriatrophium* we observed these sorts of wild beasts, lion, tiger, leopard, bear, wolf, porcupine, wild boar. The snout of this was longer in proportion than that of tame or domestic swine: the ears rounder and shorter and of a black colour, as were also the

the feet and tail. These wild swine are constantly of the same colour, which is a grisly or iron-grey. Its worth the observation that most wild animals keep to the same colour both beasts and birds; but those that are kept tame vary infinitely, which is (I suppose) to be attributed partly to the variety of their food, and partly to the highness of their feeding; to which the difference of the climate and soil may contribute something. So we see that upon the *Alps* and other high mountains covered for the most part with snow, several animals, as *bears*, *foxes*, *hares*, *partridges*, &c. change their natural colours, and become white, by reason of the coldness of those mountains, or of the constant intuition of snow.

In *Florence* many of the palaces are made of great, rough hewn stones, not laid smooth, but each protuberating above the *superficies* of the wall: which fashion of building the *Italians* call *maniera rustica*,

This city at present is rather in a decaying than thriving condition, there having not been (as we were credibly informed) a new house built there these forty years: the citizens generally being but poor. This comes to pass partly by the great decay of their trade; for whereas formerly they served *France* with silks, now the *French* themselves work them as well or better than they; partly by reason of the great exactions of the *Great Duke*, who lays immoderate gabels upon all commodities that are bought and sold. The greatest foreign trade they have at present is with our nation; and that is not much, we having most of our silk from *Messina*, *Aleppo*, and other places in the *Levant* and working it at home. This city is well situate in a good air, only somewhat sharp in winter time; the inhabitants are ingenious and quick-witted. It hath bred more excellent painters, sculptors, and architects than any one city in *Italy* besides: and for scholars and great wits it may vie with most.

It's the fashion here for gentlemen to sell their own wine by retail. Yet no body goes into the palace to drink; but there is a hole made in the cellar or buttery-wall, to give in and take out flasks or other vessels; and there is a servant attending for the most part so long as there is wine

to sell. At the palace gate or wall they usually hang up the hackles of old flasks to give notice that there is wine to be sold there.

The gentlemen think it a disparagement to them to practise physic; so that none of them bring up their children to the study of medicine; but they think it no disparagement to exercise merchandise; and for this they have the example of the *Great Duke* himself, who is the greatest merchant in *Europe*; nay *Leti* saith, that it is reported, he trades for more than all the merchants in *Genoa*.

The *Great Duke* is both here and in all his dominions supreme and absolute lord, and may *pro arbitrio* impose what taxes and gabels he pleases; and therein he is not sparing. Every house pays to him the tenth of its yearly rent. No house or land sold but a good part of the price (at least one tenth) goes to him. No women married but he hath 8 *per cent.* of her portion. Every one that goes to law pays 2 *per cent.* of what he sues for. Every young heifer that is sold pays a crown; not so much as a basket of eggs comes to market but it pays somewhat for toll. So that his revenue must needs be great: some says a million and half, others two millions of crowns yearly. His expences amount not to one million; and consequently, considering also the income of his trading, he must needs have an immense treasure; by *Leti's* reckoning more than 60 millions of crowns: but it's well if it amounts to half that sum. And though some at *Florence* would have persuaded us that the world was mistaken in this opinion of his great riches, yet we saw good reason to continue in that belief; he using all ways of thrift and sparing as well as getting; keeping no house but allowing his servants board-wages, and being at a set rate with his cook, and his baker, who for the monopoly of fine bread (*Pane di bocca* they call it) furnishes his private table, and pays 1000 *Scudi per annum* besides. Moreover it was a maxim with him, that a good treasure of money is the greatest strength and security of a Prince, and he would often say of our late King *Charles I.* that want of money ruined him, and therefore it may well be presumed himself would take care to fill his coffers with that.

Besides the territories of *Florence* and *Pisa*, called the old state, of which he is absolute lord and sovereign; and the territory of *Siena*, called the new state, for which he is feudatary of the King of *Spain*, he is also possessed of part of the isle of *Elba*, which he holds of *Spain*, part of *Grassignana*, bought of the marqueses *Malaspina*; the earldom of *St. Fiora*, purchased of the *Strozzi*; the marquisate of *Scanzano*, and the earldom of *Pitigliano* and *Sorano* formerly belonging to the *Ursini*, and some other small places, for all which he is feudatary of the Emperor. *Radicefani* in *Tuscany*, and *Borgo San Sepolchro* in *Umbria*, for which he is feudatary of the Pope.

His citadels and fortresses, especially those on the borders, are thought to be the best fortified and provided with ammunition and victuals of any in *Europe*; for the guard of which he keeps four or five thousand soldiers in constant pay. The three principal offices of trust are the governors of *Siena*, of *Leghorn*, and *Pitigliano*. He hath always about his person a guard of *German* soldiers. He is able to send into the field 40000 footmen and 3000 horsemen. *Leti* saith, that he hath 40000 footmen enrolled, who are obliged to stand ready at every call; and 1000 horsemen listed and divided into 12 companies, and these last have the privilege not to be imprisoned for debt. He can also put forth to sea upon occasion twelve galleys, two galleasses, and twenty ships of war.

He entertains and diverts the citizens of *Florence* in summer-time with sports and shews, especially races for prizes (*Pallio's* they call them) sometimes *Barbary* horses, sometimes ordinary horses running through one of the streets of the town (which thence they call the *Cursò*) without any riders. To make them go, they fasten little flaps of leather stuck with prickles upon their backs.

The great Duke holds good correspondence and amity with all Christian Princes and States; except the Pope [upon account of *Borgo San Sepolchro*, to which the Pope pretends; the marquisate of *Montefeltro*, to which the Duke hath some pretensions in right of his wife, who was heiress to the late Duke of *Urbino*; and the business of *Castro*;] and the Duke of *Savoy*, between whom and him there hath been an ancient emulation about precedencey.

The Duke hath the nomination of the bishops and governors of all the cities in his dominions.

The ecclesiastical revenues of the Duke's whole state, according to a survey taken in the year 1645, were found to be 765000 *Scudi* or crowns *per ann.* For this *Leti* is my Author.

The family of the *Medici* have had two Dukes besides those of *Tuscany*, viz. *William* Duke of *Nevers* and *Lawrence* Duke of *Urbini*; two Arch-duchesses married to them, viz. *Joan* daughter of the Emperor *Ferdinand I.* wife of *Francis I.*; and *Mary* daughter of *Ferdinand II.* wife of *Cosmus II.* four Popes, viz. *Leo X.* *Clement VII.* *Pius IV.* and *Leo XI.* two Queens of *France*, viz. *Katharine* wife of *Henry II.* and *Mary* wife of *Henry IV.* mother to our late Queen-mother, who died in *Colten* 1640. Their greatness began to exceed the measure of other families (saith my Author) by the death of Pope *John XXIII.* deposed in the council of *Constance* in the year 1414, who died in the house of *John Medicis*, and made him his heir.

The gentlemen and citizens of quality keep not their daughters at home after they be eight or ten years of age, but put them into nunneries, where they are bred and taught all manner of women's work. Out thence they come not till they be married. He that makes love to any of them may with the parents consent see and speak with them at the grate of the nunnery. This is not only a secure but also a cheap way to bring up their daughters. For they pay not to the house above sixteen pounds a year for diet and all.

About *Florence* we observed very few plants but what we had before met withal in other places. Those we noted were *Carduus chrysanthemus Narbonensis* Ger. *Acarna flore purpureo-rubente patulo* C. B. *Echium majus & asperius flore albo* C. B. *Carduus fistulalis* Ger. *Atræylis*; *Conyza major Monspeliensis odorata* J. B. *Galega*; *Scrophularia, Ruta canina dicta*; *Lotus pentaphyllus siliquosus, villosus* C. B. *Aster luteus foliis ad florem rigidis* C. B. *Iberis* J. B. *Juncus acutus maritimus capitulis rotundis* C. B. *Ageratum vulgare*; *Stoechas citrina angustifolia*; *Sideritis vulgaris* Ger. *Nigella arvensis* Park. *Satureia vestiva hortensis* Ger. *Scorpioides Telephium* Ang. *Lob. Passerina Tragi* J. B.

OBSERVATIONS Topographical,

Globularia Monspeliensium; *Melilotus major* flore albo; *Chrysanthemum Bellidis folio* Hort. Pat. *Medica orbiculata* J. B. *Solanum vulgare fructu luteo*; *Melissa vulgaris*; *Chondrilla juncea* Ger. *Chamaesyce*; *Stæbe caliculis argenteis* C. B. *Ischæmon vulgare*; *Gramen daëtyloides radice repente* Ger. *Buphthalmum vulgare* Ger. *Buglossum angustifolium* Lob. *Botrys*; *Psyllium vulgare*; *Cichorium verrucarium sive Zacynta*; *Scordium*; *Xeranthemum*; *Kali spinosum*, so far from the sea. *Gramen supinum aculeatum* J. B. *Gramen amoris dictum*; duæ varietates. *Iris floribus albis* in muris urbis copiosissimè, unde *Florentina* denominatur. In collibus urbi vicinis, *Arbutus*; *Laurus*; *Lotus arbor*; *Cyclamen folio anguloso* J. B. *Phillyrea serrata* 2 Clus. *Erica arborescens Monspeliensis*, flore purpurascens, ramulis ternis J. B. *Satureia* S. *Juliani* J. B. *Cistus fœmina* Ger. *Lychnis minima rigida Cherleri* J. B. *Pyracantha*, in sylvis juxta *Arnum*; *Aristolochia Saracenica* Ger. ibid. *Gratiola*; *Colutea vesicaria*; *Rhamnus* 1 Clusii flo. albo Ger. *Digitalis lutea vel pallida parvo flore* C. B.

The red *Florence* wine is most commended for a table wine of any in *Italy*; and doubtless it is most wholesome, and, to them who are used to it, also most gustful and pleasant. It is of a deeper colour than ordinary claret, which is caused by letting it stand longer upon the husks or *vinacea* before it be pressed. For it is the skin only which gives the tincture, the interior pulp of the grape being white.

Sept. 1.

We began our journey to *Rome*. First we passed through *Castiano*, a pretty little town eight miles distant from *Florence*; and when we had proceeded four miles further, we left the ordinary road to *Siena* by *Poggi bonzi* (which is the plainer but longer) and rode to *St. Buco*, a good large village, and from thence to *St. Donato*, a poor walled town sixteen miles from *Florence*, and fourteen from *Siena*. From *St. Donato* we rode on to *Castellina di Campi* five miles further from whence to *Siena* we had nine miles more; the first four mountainous and stony way, the last five good. All this country we rode through, and generally all *Tuscany* is mountainous and barren. Yet are not the mountains very high.

About

About 5 miles from *Florence* we took notice of the *Certosa* or *Carthusian* cloister, seated on a pleasant hill by the way side. We had the prospect of *Siena* about ten miles before we came at it. *Siena* is a fair city, some *Siena*. four miles in compass. The piazza or market-place is compass'd about with good buildings, and, for the figure of it, not unfitly resembled to a cochle or scallop-shell. This fancy had they who paved it, for on one side, viz. that next the palace they have placed the figure of the heel of a cochle-shell made in stone, and from thence have drawn rays or ribs of stone (answering to the ridges or *striae* of a cochle-shell) to the edges round. The *Domo*, or cathedral church, is a stately edifice of marble, having a beautiful front, adorn'd within-side with the heads of all the Popes, placed in the wall, round about the body of the church. Part of this church is paved with marble inlaid, or a more elegant sort of mosaick work, containing part of the History of the Bible, done by *Micherino Sanese*. This pavement is cover'd with a moveable floor of boards to preserve it. Had it been finish'd as intended, all *Europe* could not have shewn the like; but there is not a fourth part done. The painting of the library walls in this church, containing the history of *Aeneas Sylvius*, afterwards Pope *Pius II.* half by the hand of *Petrus Peruginus*, and half by *Raphael Urbin*, is, in my judgment, the most excellent painting that ever I beheld, and so fresh and lively as if it had been done but yesterday. Here are also other good churches and handsome palaces. We ascended the tower called *Torre di mangio*, from whence we had a fair prospect of the whole city, which runs out into three angles. The walls inclose much void ground, which is made use of for gardens and vineyards. All the streets and *Piazza* are paved with brick set edge-ways, after the manner of *Venice*, and the sides of the streets of the *Holland* towns. The whole town is well built, and situate upon a hill, and by that means always clean. They here make no use of snow or ice to cool or refresh their wines, their cellars keeping it cool enough. In the palace of the *Podesta* we saw a room, the walls and roof whereof were painted by *Micherino Sanese*, valued at more than the whole palace besides. We took

notice also of the theatre for comedies, a fair brick building; and the *Studium*, called the *Sapienza*, where are the publick schools, a mean building, much like that of *Pisa*. This city is counted a very good place to sojourn in for a stranger that would learn *Italian*, as well because the citizens here speak the purest language, as for that they are very civil and courteous to foreigners. Besides, by reason of its situation, the air is temperate even in summer-time; provisions also are reasonable.

Sept. 3. We travell'd to *Radicosani* 34 miles, passing through
 1. *Lucignano*, a post-village, and in sight of *Cuna* a village on a hill; also a little wall'd town call'd *Buon-convento*, then *Tornieri*, a post-village, and lastly, St. *Quirico*, i. e. *S. Cyrtaci oppidum*. Which so soon as I had pass'd, I found great store of lavender-cotton, which grew all along by the way-side. There grew also all this day's journey in great plenty, *Absinthium Romanum* Cæs. Between St. *Quirico* and *Radicosani* *Cinara* sylv. and two other species of thistle, one I guess'd to be *Carduus tomentosus* Lob. the other I knew not; *Arcana flore purpureo-rubente patulo*; *Veronica spicata cærulea*; *Winter-Savory*; *Aster luteus Linariæ folio*; *Colchicum* cover'd all the pastures. Between St. *Quirico* and *Radicosani* we pass'd no considerable town or village. All the country we rode through this day is mountainous and barren, very little wood growing on the ground. *Radicosani*, being a frontier, is strongly fortified, and held with a garrison of 300 soldiers by the Great Duke. This *Radicosani* is situate upon a high hill, so that one may see it going or coming 12 or 14 miles.

*Radico-
fani.*

Sept. 4. We travell'd from *Radicosani* to *Viterbo* 38 miles. About 10 miles from *Radicosani* we pass'd over a small river called _____ at a place called *Ponte Argentino*, which divides the State of the Great Duke and of the Pope.

It is to be noted, that in all this country the towns and villages are generally set upon the tops of hills, for coolness, I suppose. We observ'd also, that the country subject to the Great Duke, at least that part we travell'd this voyage, was craggy and bare of trees, and seem'd to us to be dry, parch'd, and barren land. But so soon

as we came into the Ecclesiastical State, the world was well amended; for the hills were for the most part covered with trees, and the vallies very fruitful. Fourteen miles from *Radicofani* we passed *Aqua-pendente*, a large old town, *lex nomen habens*, for it stands upon the brow of a hill from which the water falls perpendicularly. Then we passed *St. Liranzo*, a little town on the edge of the lake of *Volsini*, now called *Bolsa*, and rode along the brink of the lake five miles to *Bolsa*. From *Bolsa* we mounted up to *Monte Frascone*, where we tasted the much celebrated wine; and, after eight miles further riding over a spacious and fruitful plain, arrived at *Viterbo*, a large and well situate town, but not very fairly built. All that we took notice of there was two or three handsome fountains, and the monument of Pope John XXI in the *Domo*. There are sulphur-wells and hot-springs about the town, but we had not time to examine or so much as view them.

We rode to *Baceano* 22 miles from *Viterbo*, passing through *Romigliano* a pretty town belonging to the state of *Castro*. In the woods we travelled through this day upon the mountains near *Viterbo*, we found many rare plants, v. g. *Carduus glaberrimus* Ger. *Viola matronalis*; *Cassia poetica* Lob. *Cerrus minore glande* Ger. *Orob. sylvaticus vicie foliis* C. B. *Cyclaminus folio anguloso* J. B. plentifully in all the woods between *Viterbo* and *Rome*: *Mespilus vulgaris*; *Hesperis sylvestris latifolia*, flore parva albo Park. *Thlaspi Candia* Ger. *Lamium scutellaria dictum*; *Sorbus*; *Linaria major purpurea*; *Blattaria lutea*; *Cytisus cortice cinereo aut albido*, siliquis hirsutis. We cannot yet certainly determine what this plant is called by botanic writers. *Plumbago* Plinii at *Bolsena* and about *Rome* plentifully by the way sides; *Polygonum vel Linifolia per terram sparsa flore Scorpionidis* J. B. *Helleborus niger hortensis flore viridi* J. B. in vepretis montosis passim.

We travelled from *Baceano* to *Rome* 16 miles. From a mountain we passed over not far from *Baceano* we had a wide prospect of the *Campania* of *Rome*, which, being covered over with a thick mist, appeared to us (looking down upon it from the clear sky above) like a huge lake

lake of water, nor could we have persuaded ourselves otherwise, had we not before observed the like *Phænomenon* in some places of *England*. About 3 miles short of *Rome* we passed by an ancient monument like to those we had observed at *Modena*, which they call the sepulchre of *Nero*; and, somewhat more than a mile before we enter'd the city, we passed over the *Tiber* by the *Ponte Molle*, anciently *Pons Milvius*; and came upon the *Via Flaminia*, a freight paved way having *Ville* and gardens on either side it, which brought us to the gate called *Porta del Popolo*, whereat we enter'd the city,



OF R O M E.

OF *ROME* both ancient and modern, though more might be said than of any city in the world, yet because so much hath been written by others both in *Latin* and *English*, I shall be very brief, it being needless to trouble the world with what hath been already published in other books.

The most remarkable antiquities to be seen in *Rome* are some ruins and remainders of *Heathenish Temples*, *Theatres* and *Amphitheatres*, *Circi*, *Baths*, *Aquæduëts*, *Obe-lisks*, *Triumphal Arches*, *Pillars*, *Fora*, *Mausolæa*, *Statues*, *Altar-stones*, *Grave-stones* and other stones with inscriptions, *Medals*, *Entaglie* or *Gems* engraven with figures, *sacrificing vessels* and *instruments*, *Sepulchral urns*, *Lachry-mal urns*, *ancient Lamps*, *Weights*, *Rings*, *Fibulæ*, and a-bundance of other implements.

First, for ancient temples the most remarkable that I Ancient observed yet remaining, either intire or some parts or ru-Temples. ins of were

1. The *Pantheon*, now dedicated to the *Virgin Mary* and *All-Saints*, and commonly called the *Rotunda* from its figure. Its heighth was 144 feet, and its breadth as much. The roof was vaulted in form of a *cupola*, and all the light it received was by a large round hole of 3 yards diameter just in the top. It had a porch of 16 tall and massy pillars of speckled marble called oriental granite; each pillar being of one intire stone; of which there are at present only 13 remaining. Upon the architrave of the portico is inscribed in large letters.

M. AGRIP-

M. AGRIPPA L. F. COS. TERTIUM FECIT.

And underneath that in lesser Letters this,

IMP. CAES. L. SEPTIMIUS. SEVERUS. PIUS.
PERTINAX. ARABICUS. ADIABENICUS.
PARTHICUS. MAXIMUS. PONTIF. MAX.
TRIB. POT. XI. COS. III. P. P. PROCOS.
ET. IMP. CAES. M. AURELIUS. ANTONI-
NUS. PIUS. FOELIX AUG. TRIB. POTES-
T. V. COS. PROCOS. PANTHEUM. VETUS-
TATE. CORRUPTUM. CUM. OMNI. CUL-
TU. RESTITUERUNT.

This temple was covered with copper-plates or tiles, taken away by Pope Urban VIII; whence that pasquinade, *Quod non fecere barbari fecere Barberini*. He there-upon (as was thought) to silence and appease the clamour of the people, caused thereof to be made the four famous wreathed pillars and canopy of the high altar in St. Peter's church. Of the very nails [*clavi trabales*] which fastened the tiles of the portico was cast a great gun of the weight of 2800 pounds now to be seen in the castle of St. Angelo, with the figure of one of the nails, and an inscription upon it signifying whereof it was made, viz. *Ex clavis trabalibus Porticus Agrippæ*. This temple remains still intire, only despoiled of its ancient statues and ornaments. For here besides many others was that famous *Minerva* of *Phidias*. When it was first built it had an ascent of seven steps which encompassed it round, now you descend eleven steps to go into it: so much is the rubbish and earth grown up above it. Indeed a great part of old Rome lies buried under ground in its ruins. One remarkable thing in this temple they bade us take notice of, which I find not in books, that is, that the lintel and side-posts of the great door of this church (which is of a huge height and breadth for a door) are all of one intire stone; which we were content to believe rather than put ourselves to the trouble of examining. In this church is the monument of *Raphael Urbijn*, whose epitaph (he being so eminent a person and one that carried on painting to its highest perfection) I shall here insert,

Raphaeli

Raphaeli Sanctio Joan. F. Urbinat.

Pictori eminentiss. Veterumque æmula,

Cujus spirantes prope imagines si

Contemplere, naturæ atque artis sædus

Facile inspexeris.

Julii II & Leonis X Pontt. maxx. pictura

Et Architect. operibus gloriam auxit,

V. A. XXXVII integer integros.

Quo die natus est eo esse defuit.

VII. Id. Aprilis MDXX.

Hic situs est Raphael, timuit quo sospite vinct

Rerum magna parens, & moriente mari.

2. *Templum Fortunæ virilis*, according to some; according to others *Templum Lunæ*, but more probably of the *Sun* and *Jupiter*. It stands by the river side not far from the broken bridge; is now called *St. Maria Egyptiaca*, and therein the *Armenians* have their service.

3. *Templum Solis*; according to some *Templum Vestæ*; and to others *Templum Herculis Victoris*. It stands near the precedent, and is now called *La Madonna del Sole*, or *St. Stefano alle carrozze*. It is but small, of a round figure, having a *portico*, or gallery of striate pillars round about it. The walls are of stone, and it hath no windows, but receives all its light from a round hole in the top, like the *Rotonda*. This and the former remain still almost intire.

4. *Templum Dianæ Aventinæ*, now the church of *St. Sabino*. It is large; the walls of brick and the *nave* divided from the isles by twelve striate pillars on every side.

5. *Templum Herculis Aventini*; now the church of *St. Alexius* and *Bonifacius*; situate on the top of the *Aventine* mount, not far from the former.

6. *Templum Jani quadrifrontis*, in the bow-market. This seems rather to have been an arch than a temple.

7. *Templum Concordiæ*, at the foot of *Mons Capitolinus*, of which there remains only the *portico*, having eight great pillars of marble, most of them of one stone.

8. *Templum Saturni*, anciently the treasury, now *St. Adrian's* church; at the foot of the capitol, near *Severus's*

Severus's arch. The frontispiece of this church is a remainder of the old temple.

9. *Templum Antonini & Faustinae*; now *St. Lorenzo in Miranda*. The portico of this remains still intire with its ancient inscription, and a great part of the walls made of massy square stones. The marble pillars of the porch suffer much by the weather, being of that sort of stone, which hath a grain lying one way, and so riving or cleaving like wood.

10. *Templum Romuli & Remi*, now of *St. Cosmo & Lamiano*; little of the old temple remaining: the stones it seems being carried away by *Ignatius Loyola* for his foundation. There is a concurrent echo, in a *cupola* you pass under to go into the body of this church.

11. *Templum Isidis & Serapidis sive Solis & Luna*, now *St. Maria nuova*, near *Titus's arch*. The present church is no part of the old temple, nor built exactly upon the place where it stood: but behind the cloister are some part of the ruins of the old temple still remaining.

12. *Templum Pacis*. This was the largest of all the ancient temples in *Rome*, built by *Vespasian*. There are yet standing part of three vaults or arches; and the plan of the whole may easily be discerned. The great striate pillar set up before the church of *St. Maria maggiore* was taken hence, and was one of eight which supported the nave or body of this temple. It is the greatest pillar of one intire stone now remaining in *Rome*.

13. *Templum Jovis Statoris*. Of this the three pillars remaining in the *Campo vaccino* near the *Palatine* mountain are supposed to have been part.

14. *Templum Jovis tonantis*. Of this the three pillars almost buried in the earth, on the architrave whereof are these letters *ESTITUER*, standing on the left hand the *clivus* as you go up from *Severus's arch* to the capitol are supposed to have been part.

15. *Templum Fauni*, now *St. Stefano rotundo*, a large round fabrick, having two circles of pillars concentrical, the outermost of lesser pillars; the innermost of larger: in the outermost are forty four pillars, in the inner the just half of that number. Besides the pillars of the inner circle stand exactly at the same distance one from another as do those of the outer.

16. *Templum*

16. *Templum Herculis Callaici*, now *Galluzzo*. It stands in the vineyards near *St. Bibiana*; a very tall building of brick not exactly round but decagonal. The roof of it is a vault or *cupola* not so great as that of the *Rotonda*, and yet not much less. It had two doors diametrically opposite, and in the other side were eight niches for statues.

17. *Templum Bacchi extra portam Piam*, one mile without the city walls: now the church of *St. Costanza*. This also is a round structure. The walls are of brick, and of a great thickness: within it hath a lesser round, or concentric circle of twelve large pillars. There stands an ancient monument of porphyry of the fashion of a huge chest or trough, having a stone to cover it. This is curiously engraven with several figures of branches of trees, boys treading of grapes, of birds, &c. They call it the monument of *Bacchus*. In several places of the roof are to be seen very fresh the pictures of bunches of grapes, and several things belonging to the vintage. The freshness of the colours and rudeness of the figures make me doubt whether this was ancient Roman painting or no.

18. *Templum Solis*. Of this there was lately a piece standing in the garden of the *Columnæ* upon *Monte cavallo*, called *Frontispicium Neronis* and *Torre di Nerone* by the vulgar. It is now quite thrown down; only there remain in the garden vast marble stones, the greatest that ever I saw, and some of them curiously carved which came from the top of this building.

19. *Templum Romuli & Remi sub monte Palatino*, now dedicated to *St. Theodore*. This is a round brick building, into which you descend by many steps as into the *Rotonda*.

Secondly, For *Amphitheatres* and *Theatres* there are yet remaining great ruins of the amphitheatre of *Titus* now called the *Coliseo*, round without, and of an oval figure within; capable of 85000 men to sit and see. There are also some footsteps of the amphitheatre of *Stattilius Taurus*, near to the church of *St. Croce in Gierusalemme*; and lastly, a good part of the walls of the theatre of *Marcellus*, upon which the *Savelli's* palace is built.

Thirdly,

3. Thirdly, Of *Circi* there is, 1. A good part of that of *Antoninus Caracalla*, a mile out of the city. 2. Of the *Circus maximus* there is little remaining, only the fashion of it may be plainly discerned. 3. The *Circus Agonalis* stood where now is the *Piazza Navona*. 4. Of the *Circus* of *Nero* in *Campo Vaticano* nothing remains now to be seen; as neither of 5. the *Circus Flaminius*.

Fourthly, For baths there are great ruins of those of 1. *Diocletian*, wherein there were seats for 3200 persons to bathe themselves without seeing or hindering one another; in the building of which he is said to have employed 40000 Christians for fifteen years together. 2. *Antoninus Caracalla*, in which were 1600 seats or closets of polished marble. These were those *Therma in modum Provinciae extructa*. Besides there are some ruins remaining of 3. The *Thermae* of *Titus*. 4. Of *Agrippa*, near the *Rotonda*, called *Ciambella*. 5. Of *Constantine* near *St. Sylvester's*. 6. Of *Nero* near the church of *St. Eustachius*. 7. Of *Paulus Aemilius* at the foot of *Monte cavallo*, call'd *Magnanapoli*. Many others there were anciently of which now scarce any footsteps to be seen.

Fifthly, Of aquæducts the Author of *Roma antica & moderna* mentions 4. of which something remains, viz. that of 1. the *Aqua Martia* brought thirty seven miles, 2. the *Aqua Claudia*, brought thirty five. Upon the gates called *Porta di St. Lorenzo* and *Porta maggiore* there are ancient inscriptions signifying what Emperors repaired and built these aquæducts. 3. The *Appia*, brought eight miles. 4. The *Aqua Virginis* brought eight miles, which was repaired by Pope *Nicholas V*, and is yet made use of, being called *Fonte di Trivio*. Of new aquæducts there are two very stately ones built by late Popes, of which the two following inscriptions will give the reader an account.

I. *Sixtus*

I.

*Sixtus V. Pont. max. Picens
Aquam ex agro Columnæ
Viâ Prænest. sinistrorsum
Multarum collectione venarum
Ductu sinuoso à receptaculo
Mill. XX. à Capite XXII*

Adduxit :

Felicemque de nomine

Ant. Pont. dixit.

Cæpit anno I. absolvit III.

MDLXXXVII.

This work is
said to have
cost above two
hundred thou-
sand crowns.

H.

*Paulus V. Pontifex maximus aquam in agro Braccia-
nensi saluberrimis è fontibus collectam, veteribus aquæ Alsea-
tine ductibus restituit novisque additis XXXV ab Urbe
milliario duxit, Anno Domini MDCXII. Pontificatus sui
optimo.*

Sixthly, *Obelisks* we took notice of nine, i. That in
the piazza within the *Porta del Popolo*. It stood anciently
in the *Circus maximus*, but, being fallen down and broken
in several pieces, was by the appointment and at the charge
of *Sixtus V*, taken out thence, and, the several pieces
being handsomely set together again, erected here upon a
fair pedestal; on each side of which it hath an inscrip-
tion; two ancient ones on the opposite sides in the same
words, viz.

Imp. Cæsar Divi F.

Augustus

Pontifex maximus

Imp. XII. Cos. XI. Trib. Pot. XIV

Ægypto in potestatem

Populi Romani redact.

Soli donum dedit.

two modern ones on the other two sides : on one this,

Sixtus V. Pont max.

Obeliscum hunc

A Cæsare Aug. Soli

In Circo max. ritu

Dicatum impio,

Miserandâ ruinâ

Fraetum obrutumque

Erui, transferri,

Formæ suæ reddi,

Crucique inuictiss.

Dedicari iussit.

A. MDLXXXIX. Pont. IV.

On the other this,

Ante Sacram

Illius ædem

Augustior

Lætiorque surgo

Cujus ex utero

Virginali

Aug. imperante

Sol Iustitiæ

Exortus est.

It is engraven on each side with three rows of hieroglyphicks.

2. That in the piazza before St. Peter's church, the only one that still remains intire and unbroken. It was taken out of the Circus of Caligula and Nero, and set up by Dominicus Fontana, by the order and at the charge of Pope Sixtus V, as were also those of St. Maria maggiore and St. Joh. Lateran. This obelisk hath no hieroglyphicks upon it, is seventy two foot high besides the pedestal, in all 108, said to weigh (according to Laffels) 956148 pounds. Of the manner of taking up and rearing this stone, and the engines employed about it, there is a particular book written. The four modern inscriptions on the four faces of the pedestal, and the ancient one on the obelisk it self, may be seen in *Roma antica & moderna*.

3. That of St. Joân. Lateran having three rows or files of hieroglyphicks on each side it. This is the greatest of all the obelisks in Rome, being 112 foot long besides the base, and at the base nine half feet thick one way, and eight foot the other. Who brought it to Rome, and where it was set up, this inscription upon it will acquaint the reader.

Fl. Constantius Aug. Constantini Aug. F. obeliscum à patre loco suo motum, diuque Alexandriae jacentem trecentorum remigum impositum navi mirandæ vastitatis per mare, Tiberimque magnis molibus Romam conuectum in circo maximo ponendum curavit S. P. Q. R. D. D.

It

It was broken into several pieces but is well mended and set together again, and the wanting hieroglyphicks supplied.

4. That of *St. Maria maggiore*, lesser than any of the forementioned, having on it no hieroglyphicks. It was taken out of the *Mausoleum* of *Augustus*.

5. That of the *Piazza Navona*, erected by Pope *Innocent X*. It was taken out of the *Circus* of *Coracalla*, is the least of all the forementioned by much, having but one row of hieroglyphicks. Of this *Athanasius Kircher* hath written a book in *folio*, which he calls *Obeliscus Pamphilius*, from the Pope's name to whom he dedicates it.

6. That of *St. Mabuto* fast by the *Jesuits* church. It seems to be but a small piece of the top of an obelisk broken off; it is engraven with hieroglyphicks, and set up negligently on four rude stones.

7. That in the garden of the *Medici*: it is full of hieroglyphicks, and set upon a base without any inscription. It is but a small thing, and seems to have been only the top of a broken one.

8. That in the garden of the *Mattei*, given them by the senate and people of *Rome*. This also is a small one, and broken in two pieces, whereof the uppermost hath toward the top some hieroglyphicks, the lower piece hath none.

9. In the court of the palace of the Prince of *Palatrina* of the family of the *Barberini* lieth an obelisk broken in three pieces, engraven with hieroglyphicks, which it's like was longer.

10. *Roma antica* mentions another standing at the foot of the stairs in the palace of the *Ursini* in the *Campo di fiore*: but this we saw not.

11. We were told of an obelisk lying in the *Campus Martius* under a row of houses, as big if not bigger than any of those already erected, and supposed to continue intire and unbroken.

These obelisks, all that are engraven with hieroglyphicks, are of one and the same kind of stone, viz. a marble of a mingled colour red and white, which some call very hard; and which hath not in so many ages suffered the least by the weather. As for the figure of them they are made taper-wise, lessen-

ing from the basis to the *vertex* by little and little, so that indeed they are not much unlike a spit, from whence they took their name. Yet are they not continued till they terminate in a point; but when they are become too small to engrave more hieroglyphics upon, the tops are cut into the form of an obtuse pyramid. It is said, and I think truly, that the hieroglyphics engraven upon these obelisks are from the bottom to the top greater and greater by degrees; so that the lowermost and the rest all along to the uppermost appear to the spectator of equal bigness.

7.
Trium-
phal ar-
ches.

Seventhly, of *triumphal arches* there are yet remaining that of *Septimius Severus*; that of *Titus Vespasian*; that of *Constantine the Great*; that in the cow-market called the goldsmiths arch erected to *Septimius Severus's* son *Antoninus*: that of *Gallienus* and *Salonina* commonly called the arch of *St. Vito*. As for the arch called *Arco di Portogallo* in the *Via Flaminia*, mentioned in *Roma antica*, it is I suppose demolished, for we could find nothing of it. The inscriptions upon these arches, and the places where they stand, may be seen in the book intitl'd *Roma antica & moderna*.

8.
Pillars.

Eighthly, of pillars beside such as belonged to temples there are four remaining. 1. The *Columna milliaria*, which stood in the *Forum Romanum*, as it were in the center of the city, from whence they began to reckon the distance from *Rome* to all parts. This pillar is marked toward the top with this numeral letter I, of a great bigness, signifying one or the first stone, and upon every public way at a mile's end was set up a second stone marked II, and so in order at every mile's end a stone marked with the number of the miles of its distance from *Rome*: so that *ad secundum lapidem* signified at one mile's distance from this pillar; *ad tertium* two, and so on.

This pillar is not considerable for its greatness but only for the use of it, and the ancient inscriptions upon it. It is now set up on one side of the *Area* of the *Capitol*.

2. The *Columna rostrata*, erected in the *Forum Romanum* to *C. Duilius*, who obtained a victory over the *Carthaginians* in a sea-fight. There is upon it a long
inscrip-

inscription in old *Latin*, full of *lacunæ*, and hardly intelligible; which as it is supplied and made out may be seen in *Roma antica*.

3. The *Columna Trajana* or pillar of *Trajan* of white marble, still standing ever since its first erection. It is 128 foot high beside the base, which is of 12 feet. Within it is hollow and hath a pair of winding stairs of 192 steps, whereby one may ascend to the top, and there are in it 44 little windows to give light. It is made up of 24 stones, and every stone hath in it 8 steps. On it are carved in an *helical area*, compassing the pillar after the manner of a screw from top to bottom, the exploits and achievements of *Trajan* in his *Dacic* expedition, &c. The pedestal of this pillar was all buried under ground, and not to be seen, till they dug about it and laid it open by order of Pope *Paul III.* Upon it are inscribed these words.

S. P. Q. R.

Imp. Cesari Divi Nervæ F. Nervæ Trajano Aug. Germ. Dacico, Pont. maximo, Trib. Potest XVI. Imp. VI. Cos. VI. PP. ad declarandum quantæ altitudinis mons & locus tantis operibus sit egestus.

4. The pillar of *Antoninus*, much like the former, 175 foot high, ascended by 206 steps, and having 56 little windows. This pillar was broken and miserably defaced; but by Pope *Sixtus V.* mended and restored to its pristine form. Vide *Roma antica*.

Ninthly, of *Mausolæa*, there are only that of *Augustus* 9. and the *moles* of *Adrian*, now called castle St. Angelo. *Mausolæa*.

Tenthly, of *Statues* there are an infinite number in the palaces and gardens about town, both ancient and modern: I believe more than in all *Europe* beside. Some of the most famous and esteemed are, the *Equestris Statua* in brass of *M. Aurelius Antoninus Pius*, now standing in the *area* of the capitol. The statues of the two horses with men by them in stone, now standing upon the *Mons Quirinalis* which is thence called *Monte Cavallo*. The statues of *Laocoon*, the trunk of *Hercules*, and *Cleopatra*, in the Pope's garden called *Belvedere*. The famous statue 10. *Statues*.

of the bull in the Duke of *Parma's* palace, called, II. *Toro di Farnesi*. The incomparable statue of *Venus* in the Duke of *Tuscany's* villa, made by *Apollodorus* the *Athenian*. *Venus verecunda* ib. *Marfyas* hung up by the hands, ib. The wrestlers, ib. The *Country-man* who discovered *Cataline's* conspiracy in a sitting posture with a wood-knife in his hand, ib. The statue of *Meleager* in the palace of the *Pichini*. The statue of *Pasquin*, whereon the libels use to be fastened. The statue of the fellow plucking a thorn out of his foot in the capitol. The statue of the she-wolf giving suck to *Romulus* and *Remus* in brass, esteemed the ancientest in *Rome*. The gladiator in white marble worth its weight in gold, in the *Villa Borghese*. A copy of this in brass stands in St. *James's* park, *London*. Two statues resembling friendship, in the *Villa Ludovisia*.

11.

Of altar-stones, grave-stones, and other stones with inscriptions there is great plenty in all quarters of the city.

12.

Ancient
medals
and *Entaglie*.

Of ancient *Medals* and *Entaglie* there are daily digged up store; and no wonder it is, this having been the seat of the empire so long. They are to be sold in many shops, and I have frequently seen of them lying upon the stalls in the market-places. Divers also of the *Virtuosi* have collected whole series of imperial medals.

13.

Sepulchral
urns.

Of sepulchral urns of several fashions and magnitudes, some made of earth, some of stone, there are abundance to be seen in the *villæ*, gardens, and palaces of the great persons, and in the cabinets of the *Virtuosi*.

14.

As for sacrificing vessels and instruments, lachrymal urns, ancient lamps, rings, *fibulæ*, and other implements, *tesserae hospitalitatis*, weights, &c. several antiquaries there are in town, who have likewise made collections of them; as *Leonardus Augustinus*, the then Pope's antiquary, and *John Petro Bellori*, a very ingenious person, and skilful in antiquities, who shew'd us a great number of these things, and very well conserv'd. That worthy and ingenious gentleman, cavalier *Carlo Antonio dal Pozzo*, shew'd us some twenty volumes in folio, wherein were the figures of most of the antiquities in and about

about *Rome*, drawn exactly by the hand. In one of these were all the vessels and instruments used about sacrificing. In others of them we noted the *Crepundia antiqua*, which were little images made of earth like children, hares, apes, &c. found in urns. The *Sistrum* of cavalier *Gualdi* figur'd in *Roma Antica*: ancient *Statera*: ancient weights. Of these ancient weights we saw in the *Musæum* of *Leonardus Augustinus* some made of a dark red stone, handsomely polish'd, of the figure of *Holland* cheeses, and of several magnitudes, marked on one side with the number of ounces or pounds which they weigh'd. Of these weights I have seen two in the church of *St. Maria in Cosmedin*, called *Schola Græca*, and two in the church of *St. Maria in Trastevere* of the bigness of good large *Holland* cheeses, which they have a tradition, and have inscribed on the wall where they were hung up, that they were stones that the heathens hung at the feet of christian martyrs when they suffer'd, to stretch and torment them. A medal with the figure of a *talus* on one side, and on the other this inscription, *Qui ludit arrham det quod satis sit*. The ancient *Fritillus*, or dice-box, like those now in use. The ancient *Strigiles*: a medal of that sort that was used to be hung about slaves necks, having on the one side the figure of the wolf with *Romulus* and *Remus* hanging at her paps; on the other, in three concentrical circles, these words, *Tene me ne fugiam & revoca me in foro Trajani purpuretica ad Pascasium Dominum meum*. A drinking-glass made like a *Priapus*, which explains that of the poet, *Vitreo bibit ille Priapo*. The ancient timbrel, like those we have seen used now a-days. It is made in fashion of a sieve, the bottom of it on which they strike of vellum, the rim of wood, having several long holes or crannies in it, wherein are hung round pieces of brass, like great medals upon their centers; besides, there is a string cross the instrument hung full of bells.

Rome is a large city, but seem'd to us not so populous as either *Venice*, *Milan*, or *Naples*: they reckon the number of inhabitants to be about 120,000 souls, besides strangers, of which there are a great number always here. The extent of the walls is greater than of any city in *Europe*, viz. 13 miles; but they take in a

great deal of waste ground. The city is now crept down from the hills (upon which the chief of it formerly stood) into a valley by the river's side surrounded with hills. It is generally well built; many of the streets straight, and adorn'd with a great number of stately palaces scatter'd up and down all over the town; full of monasteries and churches, of which, they say, of all sorts there are above 300. It is well served with all provisions for the belly; yet are not things generally so cheap there as either at *Naples* or *Florence*. Their beef (as I intimated before) is very good, not much inferior to ours in *England*. Before they kill their beasts they put them in a great heat and chafe, for the same reason, I suppose, that we hunt deer and bait bulls in *England*, viz. to make the flesh eat more tender and short, which yet spoils the colour of the meat, and, in some men's judgment, the taste too, disposing it to putrefaction. Their sucking veal, which they call *vitella mungana*, they imagine all *Europe* cannot parallel for goodness and delicacy. Their kid, or *Caprette*, is also accounted very good meat; and so is their swine's flesh. Their mutton is the least commendable, as being for the most part tough and dry. Tame fowl they have as good and savory as in any place, v. g. hens, capons, turkies, tame pigeons. Geese are seldom here to be sold. Plenty also there is of wild fowl of the best sorts, and cheap enough; as partridge of two kinds, the common and red-legg'd partridge, wood-cocks, snipes, duck and mallard, widgeon, teal, gray, green, and bastard plover, curlews, quails. Of small birds the greatest plenty that I have any where seen: as thrushes in winter time an incredible number, black-birds store, larks infinite. One would think that in a short time they should destroy all the birds of these kinds in the country. For besides that you never fail of great numbers of them in all the poulterers shops, there is every afternoon a market of small birds, wherein they are sold by the country people. Besides the foremention'd, there are sometimes to be sold cranes, wild geese, shell-drakes, *Avosetta*, water-hens, berganders, and several other sorts of wild fowl. I have seen lying frequently in the poulterers shops, and therefore I presume some people eat them, such birds as in *England*

no man touches, viz. kites, buzzards, spar-hawks, kestrels, jayes, magpies and wood-peckers. Nothing more commonly sold and eaten here, and in all *Italy*, than coots and stares. They spare not the least and most innocent birds, which we account scarce worth the dressing, much less powder and shot, v. g. robin-red-breasts, finches of all kinds, titmice, wagtails, wrens, &c.

No want of fish either of fresh or salt water, though it be sold commonly dearer than flesh, as being brought a great way. Scarce any fish to be found any where on the coast of *Italy*, but some time or other it may be met withal here. Those that are the most frequent in the markets are, of river or fresh-water fish, pike, carp, tench, trout, eel, barble, chevin, dace. I do not remember, that I ever saw a perch to be sold in *Rome*. Of sea-fish, *Mullus antiquorum*, which they call *Triglia*, of which they have a proverb, *La Triglia non mangia chi la piglia*. He that takes the *Triglia* eats it not. This fish the *French* call *Rouge* from its colour; and we in *Cornwall* (where I have seen of them taken) *Surmullet*. *Spiegole*, in Latin *Lupus marinus*, of which kind I have not seen any in *England*; *Orate*, gilthead; *Cephal*, which we in *English* call *Mullet*, the ancients called it *Mugil*; *farde*, a kind of sprat; conger; lamprey; sole; plaise, and others of the flat kind; merluzzos, which we call hake; sometimes small sturgeons; dog-fish of several sorts; tuny and sword-fish is also to be sold here.

Wild boar and venison of wild deer you shall seldom fail of, to be sold in the poulterer's shop. Their wild deer they call *Capreole*, it is for the most part very lean. Porcupine also is sometimes to be sold in the markets.

Oranges and lemons are cheap in *Rome*; pears and apples, if they be good and large fruit, dear, they sell them by weight here, as they do generally all over *Italy*.

Their bread is very good and light, notwithstanding they use no yeast to raise it, and cheaper than ours in *England*. And here by the way it may not be amiss to take notice, that the use of yeast for the raising and fermenting of bread in these northern countries hath been very ancient. I find mention of it in *Pliny*, lib. 18. cap. 6, who thereupon gives their bread the preeminence

OBSERVATIONS Topographical,

for lightness. *Gallia*, saith he, & *Hispania frumento in potum resoluto, quibus diximus generibus, spuma ita concreta pro fermento utuntur. Qua de causa levior illis quam cæteris panis est.*

Here is great variety of wines: more sorts commonly sold than in any other city of *Italy*: as *Greco*, *Lagrine* of *Naples*, *Languedoc* wine, wine of *Syracusa* and *Augusta* in *Sicily*, *Orvietano*, *Fensano*, *Monte Pulciano*, *di Monte fiascone*, *Castelli*, *Romano*, and which is most commonly drunk, *Albano*. Most of the wines are sweet and full-bodied, and will bear half water. Sweet wines they call *abboccati*, and rough wines *asciuti*. They have little wines so harsh and rough upon the palate as our *French* claret and *Florence* red wine, though those also are to be had here. Their olives are small, but good and sweet. They have plenty of walnuts and hazel-nuts, and other fruits the same that we have. For apples and pears no country hath better, I had almost said so good as we in *England*. For apricocks I tasted none beyond the seas comparable to ours.

Rome is noted for several commodities and manufactures, as viol and lute-strings the best in *Europe*; perfumed gloves; combs of buffles horns, womens fans, vitriol, essences.

Commonly all strangers that travel thither buy of those things not for their use only, but to make presents of to their friends.

Here is doubtless the best musick in the world, especially voices, there being many eunuchs and nuns, a great part of whose employment it is to sing in the choir.

For pictures of the best masters *Rome* excels all places, there being more here than I think in all *Italy* besides; so that *Rome* is become the school of painters, who come from all parts of *Europe* hither to study and practise. At present cavalier *Bernini* is the most noted and indeed only excellent sculptor, and *Pietro de Cortona* the most eminent painter.

The *villæ* (as they now call them) of the Princes and prime nobility of *Rome*, for gardens of flowers, groves and thickets of trees, cut hedges of cypress, *Alaternus*, laurel, bay, *Phillyrea*, *Laurus tinus*, and other semper-virent

virent plants, close and open walks of great length, orchards of fruit-trees, labyrinths, fountains and ingenious water-works, bird-cages, statues and other ornaments, especially their greatness (some being in compass three or four miles) excel the orchards, gardens, and walks of any Prince in Christendom that I have seen. Of these there are a great number, but the chief of all are 1. The *Villa Borghefe*, of which family was Pope *Paul V.* This is esteemed the best of all the *villæ* and gardens about *Rome*, though it be not so vast as 2. the *villa Pamphylia*, of which family was Pope *Innocent X.* This is on the *Faniculum* without *St. Pancras's* gate, and is said to be four miles in compass. 3. The *Villa Ludovisia* belonging to the Prince *Ludoviso*; of which family was *Gregory XV.* 4. The Pope's garden at the Vatican called *Belvedere*. 5. The Pope's garden at *Monte cavallo*. 6. The garden of the Grand Duke or the *villa de Medici*. 7. The garden of *Montalto*. 8. The garden of the *Mattei*. In all which there are little palaces furnished and adorned with excellent statues, *bassi relievi*, pictures and other curiosities, which I forbear to enumerate and describe at large, that I may not spend time, and waste paper in writing what few will think worth their while or pains to read; and which hath already been published by *Mr. Laffels* in his voyage of *Italy*, to which I refer the curious for further satisfaction.

Of the palaces and public buildings I shall say nothing, only I cannot forbear a word or two of *St. Peter's Church*, which is in my opinion the most stately, sumptuous, and magnificent structure that now doth, or perhaps ever did stand upon the face of the earth. This was the only building that surprised me and exceeded my expectation, being for a work of man the most pleasant and goodly, not to say ravishing object that ever I beheld. The whole pile of that majestic bulk and greatness, that it exceeds in all dimensions the most famous temples mentioned by the antients: being in length 520 foot (as *Mr. Laffels* tells us) and 385 in breadth: and in some, the greatest christian churches; for though it be not so long as *St. Paul's London*, yet is it much broader, and in that respect much handsomer; the breadth being more proportionate to the length. The *cupola* of that

that marvellous heighth and compass (the diameter thereof being equal to that of the *Pantheon*) and sustaining on the top a huge stone lanthorn, with great pillars of stone about it, that it may well be accounted the boldest piece of architecture (as he saith) that I think the world hath seen. The roof arched or vaulted, and the vault divided into great squares or panes like wainscot after the old *Roman* fashion; the ribs and transverse borders which terminate those squares or pannels being channelled and richly gilded, and the *area* of each square almost fill'd up with a gilt rose. The oval portico encompassing a large *area* before the church, consisting of four rows of great stone pillars standing so thick that they shew like a grove of great trees: the stately porch to which you ascend out of this *area* by twenty four steps; not to mention the incrustation of some part of the walls with polished marble; the excellent statues, stately altars, rare pictures, and other ornaments, render this church truly admirable, and in all respects, I will not say comparable to, but excelling the best in the world.

During our stay at *Rome*, we rode forth to see. 1. *Frescati* twelve *Italian* miles distant, anciently called *Tusculum*, where *Cicero* had a *villa* or country-house, of which as yet they shew some remains. Here are at present three noted *villæ*; 1. That of the *Borghesi* with the palace called *Mondragone*, and two others. 2. The *Villa Aldobrandina* or *Belvedere* belonging to Prince *Pamphylis*. 3. The *Villa Ludovisia*; all of them for walks, groves, labyrinths, gardens, and other ornaments not inferior to the best about *Rome*, and for cascades or falls of water, wetting sports, and other ingenious water-works, beyond them. What we took more especial notice of, as having not before seen, was the imitation of a tempest or storm of thunder and rain. This artificial thunder they call *Girandola*.

2. *Tivoli*, antiently *Tibur*, eighteen *Italian* miles off *Rome*. Of this city *Horace* was much enamoured, praying that it might be the seat and retirement of his old age. *Tibur Argeo positum colono, Sit meæ sedes utinam senectæ, Sit modus lassæ maris, & viarum militiæque.* It stands like *Frescati* on the brow of a hill, and overlooks the *campagna* of *Rome*. Here are some remains of ancient

cient temples, and other buildings, and a remarkable cascade of the river *Aniene* or *Tevere*. The villa of *Este* for gardens and orchards, walks and groves, the *Girandola* and other water-works, is nothing inferior to those at *Frescati*. About five miles distant from *Tivoli* we passed over the sulphur-river, the water whereof is warm, of a bluish colour and noisom smell, much like to that of the sulphur-well at *Knareburgh* in *Yorkshire*. It incrusts the channel it runs in with a whitish kind of friable stone, which in many places in the bottom and sides of the channel congeals in the figure of confections or sugar-plums which they call *Confetti de Tivoli*. Of these you have boxes full to be sold at *Rome*, so exactly resembling confections both for figure and colour, that no man can distinguish them; but they are not naturally found so figured, as they would make strangers believe, but artificially made so by casting in moulds. About *Frescati* we found great store of *Styrax arbor* growing wild in the hedges, which we found no where else beyond the seas.

The campagna of *Rome* seems to be good land, but is esteemed a very bad air and unhealthful country to live in, which is the reason it is so desolate and thin of inhabitants.

I had almost forgot one natural phenomenon we observed at *Rome*, which did a little surprise us. In sharp frosty weather in the middle of winter, the water which the servants brought up to wash with in the morning was hot to that excess, that we did verily believe they had heated it over the fire; nor could we be persuaded of the contrary till we went down to the fountain, and found it there of equal temper with what was brought up. It was formerly taken for granted by the *Peripatetic* schools, that fountains of springing water are hotter in cold weather or winter, and colder in hot or summer than at other times, the reason whereof they assigned to be an *Antiperistasis*, satisfying themselves with that, and seeking no further. Later philosophers, who could not content themselves with the notion of *Antiperistasis*, chose rather to deny the truth of the experiment, and affirmed that fountain-water was not really warmest in the coldest weather, or coldest in the hottest, but only seemed so to our sense; the temper of which is much altered according to the

the difference of the weather. So that what is much colder than our temper, in hot weather, is not much colder in cold weather, and so seems not so cold, and on the contrary. Or thus, we judging of the heat and cold of other things by the proportion they bear to the temper of the air about us, when the air is very cold, though the water hath the same degree of cold it had before, yet it may be hotter than the air, and consequently seem to us actually hot, and *vice versa*. But for my part whatever the reason be, I must needs assert the truth of the experiment, being very confident that the water, at least of some sources, doth not only seem to be but really is much hotter in cold frosty weather than at other times; else this water could not possibly have seemed to us, as it did, more than lukewarm.

Great store of rain falls here in winter time to make amends for the extraordinary heat and drought of the summer.

Rome is a place not only well worth the seeing, but very convenient to sojourn in, there being where-withal to entertain and divert men of all sorts of humours and tempers.

The present *Romans* seemed to me in their houses and furniture, particularly their beds and lodging, in their diet, in their manners and customs, and in their very pronounciation (so liquid, plain, and distinct) more to symbolize and agree with us *English* than any other people of *Italy*; whether it were that we learned of them, or they of us, or both mutually of each other, when there was that great commerce and intercourse between us and that city for so many years together.

To describe at large the court of *Rome*, with all its officers and ministers; the ecclesiastical government of the *Romish* church in general; their ceremonies and shews; the civil government of the territories subject to the Pope, and particularly of the city of *Rome*; the interest of the Pope, and the terms he stands in with other Princes, would require a volume alone; and therefore I shall choose rather wholly to omit those particulars for the present, and pass on to the description of our succeeding voyage.

January

January 24. 1664. We departed from Rome, and began our journey to Venice; riding along the *Via Flaminia*, and passing the *Tiber* again by the *Ponte Molle*, or *Pons Milvius*. At seven miles distance from Rome we passed a small village called *Prima porta*. Some suppose that anciently the city extended thus far: which conjecture I conceive is grounded upon the name of this place. Eight miles further riding brought us to a small town called *Castel novo*, where we lodg'd. All this afternoon we rode near the *Tiber*, upon the *Via Flaminia*, which reaches as far as *Rimini*. It is paved with broad flints and pebbles, and hath on each side a border of stone, and in that border, at every second or third pace, a stone standing up higher than the level of the border. We observed in the fields we passed through this day great store of vernal *crocus's*, now in flower.

We proceeded on to *Arignano*, or *Ariano*, a little town, and a post-stage eight miles. Here we left the *Via Flaminia*, and rode round a high hill (which stands single, and may be seen twenty miles forward) to *Civita Castellana*, a little town standing on a hill and a post-stage, nine miles. Not far from hence we had the prospect of *Caprarola* and the Duke of Parma's palace, [where we were told is a whispering room like that in the palace of *Te* at *Mantua*] which seemed not to be more than two or three miles distant in a right line, but we were assured that as the way lay it was ten or twelve miles thither.

Four miles further we came to a poor small town called *Borghetto*; a little below which we passed the *Tiber* by a bridge called *Ponte Felice*, begun by *Sixtus V.* and finish'd by *Urban VIII.*, for the benefit of travellers and pilgrims, as appears by an inscription upon it. Not far from the river, on our right hand, we passed under a little town, standing on the top of a hill, called *Magliano*, and rode on about 6 miles near the bank of the river (having in prospect at a good distance on our left hand a town called *Horta*) till we came to *Utricoli*, which town at present stands upon a hill, but by the ruins that remain, the ancient *Ocricoli* seems to have lain near the river, at least part of it.

From

Narni

From *Utricoli* we had stony way over the mountains for five miles. For about a mile before we enter'd *Narni* we rode upon the brink of a horrid precipice by the river *Nera's* side. *Narni* anciently called *Nequinum*, and afterwards *Narnia* from the river *Nar* which runs beneath that steep rocky mountain upon the ridge whereof this city stands, was formerly a *Roman* colony, and a place of some account, but is now very mean, poor, and inconsiderable. *Leander Albertus* saith it was ruined and left almost quite desolate by the *Venetian* soldiers, who were quartered there in the time that the Emperor *Charles V.* besieged Pope *Clement VII.* in the castle *St. Angelo Gattamelata* the famous captain for the *Venetians*, to whom they have erected a brass statue on horse-back near *St. Anthony's* church in the city of *Padua*, was native of this town. Near *Narni* are seen the remainders of vast arches of stone, which some say were of a bridge, others more probably of an aqueduct, over the river from one mountain to another.

26.

"We rode from *Narni* over a pleasant and fruitful valley, incompass'd with mountains, and cultivated after the manner of *Lombardy*, to *Terni*, anciently *Interamna* from its situation, a handsome little city, having a pretty piazza, on which stands a church that seems to have been an ancient temple. About four miles from this town is that famous cascade or fall of water from the lake *di Pie di Luco*. At the further end of this valley beyond *Terni* and upon the hills were the greatest olive-yards or rather forests of huge olive-trees that I have any where seen in *Italy*, and at this time of the year we found the people very busy in brushing down and gathering of olives.

Spoletto.

From *Terni* we had mountainous way to a little place called *Tritura*, another post-stage, and from thence we descended to *Spoletto*, the chief town of *Umbria* thence called *Ducato Spoletano*. The walls of this city are of a large extent, and the houses indifferently fair, and there are to be seen many ruins of ancient buildings in it.

From *Spoletto* we rode through a very pleasant and fruitful valley of a great extent, surrounded with mountains, much resembling the *Area* of an amphitheatre, planted with rows of trees and vines after the manner of *Lombardy*.

dy. The hills round about yield a pleasant prospect, being sprinkled every where with little towns and houses set thick upon them. About four miles short of *Foligno* we rode under an indifferent great town, standing on a round hill, called *Trevi*.

Foligno [*Fulginium*] is a pleasant and handsome little town, noted for confections and sweet-meats. At the end of the valley of *Spoleto* beyond *Foligno* we observed the like woods of olive-trees as in the valley of *Terni*.

Leaving *Foligno* we ascended again in a way cut out of the side of a mountain, having on our left hand a huge precipice, and below a valley between very high and steep hills, into which at the upper end falls down a little river called *Dale*, which drives some paper-mills; a pleasant place to behold. About four or five miles from *Foligno* we got up to the top of the *Appennine*, where the mountains all about us were covered with snow. On the top of these mountains is a little plain, and upon it a small lake or pool of water, and a village called *Col fiorito*, a very pleasant place in summer-time, as its name imports. When we had passed over this plain we began again to descend, and the next considerable village we came to was *Serravalle*, *ex re nomen habens*, it being situate in the jaws of a narrow valley, fourteen miles distant from *Foligno*. From *Serravalle* we rode among the mountains by the side of a little river, passing several small villages, viz. *La Muccia* or *Mutia* and *Pulverina*, &c. and lodged at *Valcimarra*.

We rode through *Tolentino*, a pretty little town, having a handsome piazza, nine miles distant from *Valcimarra*. This was the birth-place of *Franciscus Philelphus* a learned man, and a great critic in the Greek tongue. He it was that invented the word *stapes* for a stirrup, which before had no name in *Latin*. From *Tolentino* we had ten miles to *Macerata*, a large, well built, and populous town, having a handsome piazza. It is the capital city of *Marca Anconitana*, where the cardinal-legate or governor of the province usually resides. From *Macerata* we rode to *Loretto* passing through *Recanati*, in *Latin Ricinetum*, a very pretty town, situate on the ridge of a hill, and but three miles short of *Loretto*. It arose from the ruins of *Helvia Ricina*, destroyed by the *Goths*. Here we

Narni

From *Utricoli* we had stony way over the mountains for five miles. For about a mile before we enter'd *Narni* we rode upon the brink of a horrid precipice by the river *Nera's* side. *Narni* anciently called *Nequinum*, and afterwards *Narnia* from the river *Nar* which runs beneath that steep rocky mountain upon the ridge whereof this city stands, was formerly a *Roman* colony, and a place of some account, but is now very mean, poor, and inconsiderable. *Leander Albertus* saith it was ruined and left almost quite desolate by the *Venetian* soldiers, who were quartered there in the time that the Emperor *Charles V.* besieged Pope *Clement VII.* in the castle *St. Angelo*. *Gattamelata* the famous captain for the *Venetians*, to whom they have erected a brass statue on horse-back near *St. Anthony's* church in the city of *Padua*, was native of this town. Near *Narni* are seen the remainders of vast arches of stone, which some say were of a bridge, others more probably of an aqueduct, over the river from one mountain to another.

26.

We rode from *Narni* over a pleasant and fruitful valley, encompassed with mountains, and cultivated after the manner of *Lombardy*, to *Terni*, anciently *Interamna* from its situation, a handsome little city, having a pretty piazza, on which stands a church that seems to have been an ancient temple. About four miles from this town is that famous cascade or fall of water from the lake *di Pie di Luco*. At the further end of this valley beyond *Terni* and upon the hills were the greatest olive-yards or rather forests of huge olive-trees that I have any where seen in *Italy*, and at this time of the year we found the people very busy in brushing down and gathering of olives.

Spoletto.

From *Terni* we had mountainous way to a little place called *Tritura*, another post-stage, and from thence we descended to *Spoletto*, the chief town of *Umbria* thence called *Ducato Spoletano*. The walls of this city are of a large extent, and the houses indifferently fair, and there are to be seen many ruins of ancient buildings in it.

From *Spoletto* we rode through a very pleasant and fruitful valley of a great extent, surrounded with mountains, much resembling the *Area* of an amphitheatre, planted with rows of trees and vines after the manner of *Lombardy*.

dy. The hills round about yield a pleasant prospect, being sprinkled every where with little towns and houses set thick upon them. About four miles short of *Foligno* we rode under an indifferent great town, standing on a round hill, called *Trevi*.

Trevi.

Foligno [*Fulginium*] is a pleasant and handsome little *Foligno.* town, noted for confections and sweet-meats. At the end of the valley of *Spoletto* beyond *Fuligno* we observed the like woods of olive-trees as in the valley of *Terni*.

Leaving *Foligno* we ascended again in a way cut out Jan. 27. of the side of a mountain, having on our left hand a huge precipice, and below a valley between very high and steep hills, into which at the upper end falls down a little river called *Dale*, which drives some paper-mills; a pleasant place to behold. About four or five miles from *Foligno* we got up to the top of the *Appennine*, where the mountains all about us were covered with snow. On the top of these mountains is a little plain, and upon it a small lake or pool of water, and a village called *Col fiorito*, a very pleasant place in summer-time, as its name imports. When we had passed over this plain we began again to descend, and the next considerable village we came to was *Serravalle*, *ex re nomen habens*, it being situate in the jaws of a narrow valley, fourteen miles distant from *Foligno*. From *Serravalle* we rode among the mountains by the side of a little river, passing several small villages, viz. *La Muccia* or *Mutia* and *Pulverina*, &c. and lodged at *Valcimarra*.

We rode through *Tolentino*, a pretty little town, having 28. a handsome piazza, nine miles distant from *Valcimarra*. *Tolentino.* This was the birth-place of *Franciscus Philelphus* a learned man, and a great critic in the *Greek* tongue. He it was that invented the word *stapes* for a stirrup, which before had no name in *Latin*. From *Tolentino* we had ten miles to *Macerata*, a large, well built, and populous *Macerata.* town, having a handsome piazza. It is the capital city of *Marca Anconitana*, where the cardinal-legate or governor of the province usually resides. From *Macerata* we rode to *Loretto* passing through *Recanati*, in *Latin* *Recanati.* *Ricinetum*, a very pretty town, situate on the ridge of a hill, and but three miles short of *Loretto*. It arose from the ruins of *Helvia Ricina*, destroyed by the *Goths*. Here we

Loretto.

we took notice of a table with a brass statue of the *Virgin Mary* in *basso rilievo* upon it, and an inscription, giving thanks to her that she was pleased to fix her house in the territory of this city.

Loretto stands likewise upon a hill, a pretty small place, consisting only of one little street within the walls, and a burgo or suburb without likewise of one street, as big as the city within. The church and college of the canons stands at one end of the street. Before the church is a little piazza having a cloister or portico on one side where the canons lodgings are. In the midst of this piazza is a handsome fountain, and before the church door a brass statue of *Sixtus V.*, in a sitting posture, with an inscription signifying that he had advanced *Loretto* to the dignity of a city, giving it a bishop. The doors of the church are of brass cast and graven with several histories. The church is built like our cathedrals in form of a cross, having a *cupola* in the middle, directly under which stands the *Santa Casa*, or holy house (as they call it) inclosed in a case of white *Parian* marble, curiously engraven with several figures in b. r. representing several histories, by the best sculptors then living. The house itself is sufficiently described in the history of it written by *Turfellinus*. The walls (which are now only remaining, the roof being removed) are made of a kind of red stone (as they would have us believe) not only of the colour but also of the figure of bricks, indeed so like bricks that I can hardly persuade myself they were any other. This kind of stone, they say, at this present is found about *Nazareth* and no where else, which if true is one of the best arguments they have to prove that this house came from thence. That the reader may see what weak proofs and little evidence they have of the miraculous transportation of this house from *Judea* hither, I shall here insert the whole relation of it made by themselves, which is translated into thirteen languages, and hung up in tables here in the church: and in *English* runs thus,

Ave Domina Angelorum.

The miraculous Origin and Translation of the Church of our Lady of Loretto.

The

The church of *Loretto* was a chamber of the B. Virgin nigh *Jerusalem*, in which she was born and bred, and saluted by the angel, and therein conceived and brought up her Son *Jesus* to the age of twelve years. This chamber after the ascension of our Saviour was by the apostles consecrated into a church in honour of the B. Lady : and St. *Luke* made a picture to her, likewise extant therein to be seen at this very day. It was frequented with great devotion by the people of the country where it stood whilst they were Catholics. But when leaving the faith of *Christ* they followed the sect of *Mahomet*, the angels took it and carried it into *Sclavonia*, and placed it by a town called *Flumen*, where not being had in due reverence, they again transported it over the sea to a wood in the territory of *Recanati*, belonging to a noble woman called *Loretta*, from whence it took the name of our Lady of *Loretto*; and thence again they carried it, by reason of the many robberies committed, to a mountain of two brothers in the said territory : and from thence finally, in respect of their disagreement about the gifts and offerings, to the common high-way not far distant, where it now remains without foundations, famous for many signs, graces, and miracles; whereat the inhabitants of *Recanati*, who often came to see it, much wondering, environed it with a strong and thick wall, yet could no man tell whence it came originally, till in the year 1296. the B. V. appeared in sleep to a holy devout man; to whom she revealed it, and he divulged it to others of authority in this province, who, determining forthwith to try the truth of the vision, resolved to chuse sixteen men of credit, who to that effect should go all together to the city of *Nazareth*, as they did, carrying with them the measures of this church, and comparing therewith the foundation remnant, they found them wholly agreeable; and in a wall there by engraven, that it stood there, and had left the place. Which done they, presently returning back, published the premises to be true: and from that time forward it has been certainly known, that this church was the chamber of the Virgin *Mary*: to which Christians began then, and have ever since had great devotion,

votion, for that in it daily she hath done and doth many and many miracles.

One *Frere Paul de Sylva*, an eremite of great sanctity, who lived in a cottage nigh unto this church, whither daily he went to mattins, said that for ten years space, on the eighth of *September*, two hours before day he saw a light descend from heaven upon it, which he said was the B. V. who there shewed herself on the feast of her nativity. In confirmation of all which, two virtuous men of the city of *Recanati* divers times declared unto the prefect of *Terreman* and governor of the forementioned church as followeth, The one called *Paul Renalducci* avouched, that his grandfather saw when the angels brought it over the sea, placed it in the forementioned wood, and had often visited it there; the other, called *Francis Prior*, in like sort affirmed, that his grandfather's grandfather, being 120 years old, had also much frequented it in the same place, and for further proof that it had been there, he reported that his grandfather's grandfather had a house nigh unto it, wherein he dwelt; and that in his time it was carried by the angels from thence to the mountain of the two brothers, where they placed it as abovesaid.

By order of the right reverend monsignor *Vincent Cassal* of *Bologna*, governor of this holy place, under protection of the most reverend cardinal *Moreni*.

I *Robert Corbington* priest of the society of *Jesus*, in the year 1634. have faithfully translated the premisses out of the *Latin* original hanging in the said church.

To the honour of the ever-glorious Virgin.

The treasury of this church is very rich, full of jewels, precious stones, gold and silver vessels, and *tabula votiva*, embroidered altar-clothes, copes, vests, &c. of great value, besides other ornaments and curiosities, which have been presented by several Princes and great persons. The most considerable particulars those that are curious may find set down in *Lassels's Voyage of Italy*, as also of the

the vessels and plate in the house itself. The earthen pots in the apothecary's shop, most part of them painted by the hand of *Raphael de Urbino*, and the great wine-cellar, are things that use to be shewn to travellers.

We travelled from *Loretto* to *Ancona*, fifteen miles of 30.
foul way. This is a considerable city, well peopled and frequented by merchants, by reason of the commodiousness of the harbour, which was formerly the very best in all the gulph, but is now run much to decay. The chief remarkables we took notice of were [1.] The remainders of the stones securing the antient port, where stands that famous triumphal arch of white *Parian* marble, by order of the senate erected to *Trajan*; composed of huge stones, and thus inscribed:

Imp. Cæsari. Divi. Nervæ. F. Nervæ. Trajano.
Optimo Aug. Germanic. Daci. Co. Pont. Max. Tr.
Pot. XIX. Imp. IX. Cof. VI. PP. providentissimo.
Principi. Senatus. P. Q. R. Quod. accessum
Italiæ, hoc. etiam. addito. ex. pecunia. sua. portu.
tutiores. navigantibus reddiderit.

On the right side is inscribed, *Plotinæ. Aug. Conjug. Aug.*
and on the left side *Divæ Marcianæ. Sorori.*
Aug.

On the top of this arch formerly stood a *Statua equestris* of *Trajan*, which is now taken down and set over the gate of the merchants-hall or exchange, which was [2.] the second remarkable. [3.] The theatre for comedies. [4.] The *Damo* or church of *St. Cyriacus*. [5.] The citadel. [6.] The shell-fish called *Pholades* in *Latin*, because they live in holes within a soft kind of stone, or hard clay, which being exposed to the air, in process of time, becomes a perfect stone for hardness. The *Italians* call these stones *Balle di Sasso*, and the fish *Ballare* or *Dattyl de mare*. They find the stones (as they told us) out at sea in great plenty, and, taking them up, bring them into the harbour where they keep them. We had a dish of them dress'd, which were no unpleasant meat, inferior for taste to no shell-fish except an oyster.

^{31.} We travelled along the sea-coast twenty miles to *Sinigaglia*, antiently *Sena Gallica*, a handsome little city, well walled about and fortified. Here is a small harbour for boats and barges. From *Sinigaglia* we still followed the sea-shore to *Fano*, fifteen miles distant; by the way passing over two long bridges. *Fano*, antiently *Fanum Fortunæ*, is a much larger city than I had imagined, well walled and fortified. There is an old triumphal arch erected to *Augustus*, which, because it had been somewhat broken and defaced in the wars with *Malatesta*, they have in the wall by set a model of it as it was when intire, whereon is inscribed, *Effigies arcus ab Augusto erecti, posteaque ex parte diruti bello Pii II. contra Fanenses, Anno MCCCCLXIII.*

DIVO AUGUSTO PIO CONSTANTINO
PATRI DOMINORUM.
IMP. CAES. DIVI F. AUGUSTUS PONTI-
FEX MAXIMUS COS. XIII TRIBUNITIA
POTEST. XXXI IMP. XXVI PATER PA-
TRIAE MURUM DEDIT.

CURANTE L. TURCIO SECUNDO APRO-
NIANI PRÆF. URB. FIL. ASTERIO V.C.
CORR. FLAM. ET PICENI.

Here we saw the antient temple of *Fortune*, now the *Augustine* friars church: and the bras statue of *Fortune* which was adored, taken out thence, now standing in the palace. In this city is a senate of seventy gentlemen, changed every third or fourth year, who out of their own number elect, every two months, two priors and a gonfalonier, but the governor or monsignor, placed here by the Pope, is the *Dominus fac totum*. *Malatesta*, tyrant of *Rimini* (as they call him) seized also upon this place, but was driven out by Pope *Pius II*, assisted by the Duke of *Urbino*, *Carignano* of *Ancona*, and one *Cassaro*. These two gentlemen had each of them a ladder for his arms, the one red, and the other white. The city out of gratitude took these two ladders for their arms, leaving their former which was a gate or arch with this motto under it, *In hac porta stat hic*

hic Leo fortis. This city is by some esteemed one of the best situated in *Italy*.

We still held along the shore till we came to *Pesaro*, *Feb. 1.* 1664. anciently *Pisaurum*, seven miles. This is a very elegant and pleasant city, having a handsome piazza, encompassed with fair buildings; therein stand many ancient stones with inscriptions. We passed through a long well built street, and had a prospect of the *cupola* of the *Domo*. The haven is almost choaked up. It is walled about and fortified with bastions and a castle. We saw this town only *in transitu*, but it merited a little demurr. From hence we crossed the country to a village called *Catolica* ten miles. We left *Gradara* on our left hand but came not in sight of it. From *Catolica* we rode along the sea-shore for the most part till we came within two or three miles of *Rimini*, and then left the shore and took the *Via Flaminia*. From *Catolica* to *Rimini* they reckon fifteen miles, yet may *Rimini* easily be seen from thence. *Rimini* is a pretty proper city, having streight streets like *Pesaro* and *Fano*, yet are the buildings but low. Within the walls of this town we passed under a high stone-arch erected to *Tiberius* (*Schottus* saith *Augustus*) *Cæsar*, but the inscription was somewhat defaced. In the piazza we viewed the stone on which *J. Cæsar* is said to have stood when he made a speech to his soldiers, animating them to accompany him to *Rome* and invade the city's liberty. On it are these modern inscriptions,

C. Cæsar Dict. Rubicone superato civili bell. commilit. suos hic in foro Ar. adlocut.

Suggestum hunc vetustate collapsum Coss. Ariminensium Novembris & Decembr. M D V. Restit.

In another piazza we saw a brass statue of *Paulus V.* Being carnival time we found the gentlemen here tilting. They ran not at one another but at a puppet or man of straw, *Bambaccio* they call it.

We made a digression to *St. Marino*, a little town ^{2.} standing on the top of a very high hill, some ten miles or *S. Marino* more distant from *Rimini*. This place hath maintained itself in the condition of a free state or commonwealth, as the inhabitants boast, for above 1000 years, but it's well if half so long. The territory of this republick is but

one mountain about three miles in length, and some nine or ten miles round. In this small territory they have four *castelli* or villages, *viz.* *Serravalle, Fietano, Monte Giardino,* and *Fiorentino*: eight corn-mills upon the little river *Canova*, which bounds this territory towards the north, and two powder-mills: the number of souls is about 4000 or 5000, of soldiers or fighting men 1500. The arms of this republick are three towers upon a mountain, and under it this motto, *Libertas perpetua*. The *Borgo* of *St. Martin* stands at the foot of the hill upon which the town is built, and is like some of our *North-Wales* towns. In this *Borgo* weekly on *Wednesdays* is held a market, where are bought and sold a great number of swine, especially in carneval time, three, four, or five thousand on a market-day. The reason of this great concourse to buy and sell here is because they pay so little toll, *viz.* about six pence for a drove, be they more or less. From the *Borgo* up to the town are two ascents, the one more easy and winding about to the furthest gate, by which coaches may make a shift to get up, the other steep to the nearer gate. On one side the town is walled about, on the other side it needs it not, for it stands on the brow of a precipitious rock of a very great height, whereon they have placed three towers in a row. On the side where the wall goes the hill is very steep and almost impossible to climb but by the made ways. There is no hill near it that can any way offend it, and those that are next far lower than that whereon the town is built. The streets of the town are narrow, and the houses but mean. Here live about sixty Jews. Two cloisters they have within the walls, one of discalceate *Franciscans* or *Succolanti*, the other of nuns of the order of *Santa Clara*; without the walls in the *Borgo* is a monastery of *Capucines*, and about a mile from the town a fair convent of the *Servita*. They have twenty five small pieces or drakes and two culverines. This place is a bishop's see, and the bishop of it is bishop also of *St. Leo, Monte Feltre,* and *La Penna*. This republick is surrounded by the territory of the Pope; they stamp no money; they have neither friendship nor enmity with any of the States or Princes of *Italy*; and in the several wars of *Italy* they have enjoyed peace. On occasion they send ambassadors

to the neighbouring Princes and States. At *Rome* they have their Protector, who at present is cardinal *Carlo Barberini*, to whom they sometimes send presents, viz. 100 little cheeses or a butt of *muscatella*. They acknowledge no superior under God, but have absolute power in civil and criminal causes. If a person banished from other places retires hither, they sometimes give him protection, but it is done by the major vote of the council. If one man kill another, though in his own defence, he is sentenced by the commissary or judge to pay 100 *Scudi*, but he petitioning the council, they usually bring it down to twenty five. If one murders another and flies, he is banished for ever and all his goods confiscate. This republick maintains a physician and a surgeon at the publick charge. The muscatella's of this place are much esteemed, and the gentry hereabout in summer-time come ordinarily hither to drink them, and enjoy the *fresco*. Cows they have none, but sheep and goats good store; of whose milk they make little cheeses that eat well. From the hill we had a prospect of *Monte Leone*, a strong fortress formerly belonging to this republick, but taken from them by the duke of *Urbino*. They have four great fairs, every year, the chiefest of all is on St. *Bartholomew's* day, at which time there is a general muster of all their forces. At these fairs there is great abundance of young cattle sold. Many veals driven as far as *Florence*. These fairs and markets disgust the neighbouring Princes, as being a great diminution of their tolls.

The government of *St. Marino* is by a council of forty five, which they call *Corpo di Principe*. Of these fifteen are gentlemen (for there are about twenty families of gentlemen in this state) fifteen artisans or tradesmen, and fifteen farmers or countrymen. They continue for their lives, and when one dies another is chosen by the two third parts of the votes, when a gentleman a gentleman, and so of the rest. These counsellors chuse out of their own number from six months to six months two *capitanei* (which have the like power as consuls, or mayor, with us) after this manner. When the old captains go out of office they nominate twelve; the names of these are written in six scrolls of paper, viz. two names in a scroll. These scrolls are put into a hat or box, and a boy

puts in his hand and draws out three. These three the elder captain takes and carries to the church of the sacrament, and *Te Deum* being sung, a priest puts the three scrolls into a hat, and a young child puts in his hand and draws out one, and they whose names are therein written are *capitanei* for the next six months. These *capitanei* cannot be elected again for two years following. Besides, the great council elect out of themselves by major vote a lesser council of twelve, *viz.* four out of each order. And to this council civil and criminal causes and quarrels of right and wrong are referred. This commonwealth hath a commissary or judge, who must be a doctor of law, and always a foreigner. He is elected by the council and continues eighteen months. His stipend is ten crowns the month. His sentence is confirmed, or may be repealed or mitigated by the council. The chancellor is elected in like manner. He is a notary and his allowance is sixty scudi or crowns *per annum*. They have also a captain of the *militia*, who continues in office as long as the council pleases. But enough and more than needs will most readers think of this petty commonwealth; concerning which I should not have been so large, but that no body that I know of before me hath made any particular description of its state and government, as accounting it not worth their while to enquire into it, or their pains to set it down.

3. We travelled from *Rimini* to *Ravenna*. We passed the famous bridge over the river *Rimino*, begun by *Augustus* and finished by *Tiberius*. The people say that the stones are joined together without any cement. Indeed the sides or walls of it are of vast stones, each as high as the border and of breadth proportionable, immediately contiguous without any mortar or cement between that I could discern. There is upon it an inscription in large letters signifying when and by whom it was built. At fifteen miles distance from *Rimini* we passed through a little town called *Cesenatico*; then *Cervia* about five miles further, a place environed with fens. It is a bishop's see, and therefore hath the title of a city, yet is it but a mean and pitiful town. All the way between *Cervia* and *Ravenna* till we came within two or three miles of the town, we had a wood of pine-trees on our right hand called *Pigneda*,

Pigneda, bearing fruit enough (as *Schottus* saith to serve all Italy.

Ravenna stands between two rivers [*Bedesio* and *Mon-Ravenna*. tone] one running on one side, and the other on the other. It is a large town but ragged and not well built, the houses are all very low. It hath five gates, an old castle of brick; three very fair convents, one called the *Classe*, belonging to the *Monachi Classenses*, the church whereof is dedicated to *St. Romualdo*. A second called the *Porto*, because it is dedicated to *St. Maria Portuensis*. It belongs to the *Canonici regulares Lateranensis*. A third of *Benedictine* monks dedicated to *St. Vitale*. The church of this convent is a double octagon, the one concentric to and included in the other, built as they told us by *Justinian*. The monks shewed us here two marble pillars, for which they said the *Venetians* offered them their weight in silver; but we have seen the like elsewhere, viz. in the library at *Zurich*, and at *Verona* in our Lady's chapel in the garden of Seignior *Horatio Giusti*. Their generation at first was of a mass or heap of small flints and pebbles united into one body by a cement petrified as hard as themselves and capable of politure. Probably this cement was separated by degrees from a fluid wherein these stones lay. To these monks belongs the *Rotonda*, a little round church dedicated to the Virgin *Mary*, about 1/4th of a mile without the walls: the intire roof whereof is of one single stone, notwithstanding that the diameter of the church is fourteen of my ordinary paces, which are near so many yards. In the midst of this stone is a round hole to let in the light. Upon the top of it formerly stood a porphyry monument of *Theodoricus*, a *Gothic* king, who is supposed to have built it. This monument is now taken down and set in the wall of the convent of the *Succolanti*, by the way-side with this inscription, *Vas hoc Porphyriacum al. Theodorici Gottor. imp. cineres in Rotundæ apice recondens, huc Petro Donato Cæssio Narnien. præfule favente translatus ad perennem memoriam Sapientes Reip. P P. C. MDLXIII.*

The monastery of the *Succolanti* is one of the fairest we have seen belonging to that order, and the church dedicated to *St. Apollinaris* deserves notice taking, as well for the double row of marble pillars brought from
Constanti-

OBSERVATIONS *Topographical,*

Constantinople by *Theodoricus*, as for the ancient figures of Mosaic work in the walls. In the *Domo* we noted the figures of the archbishops of *Ravenna* in Mosaic work. Eleven of them had a dove standing upon their heads, which they say were chosen by a dove alighting and sitting upon their heads, the legend whereof may be seen more at large in *Schattus*. Near the *Franciscans* cloister is the monument of *Dante* the famous poet, which is an arch erected to his memory by *Bernardus Bembus*, the *Venitian* *Podesta* in *Ravenna*; under which is his effigies, and two inscriptions in *Latin* verse,

I.

*Exigua tumuli Dantes hic sorte jacebas,
Squallenti nulli cognite pene situ;
At nunc marmoreo subnixus conderis arcu,
Omnibus & cultu splendidiore nites.
Nimirum Bembus musis incensus Etruscis
Hoc tibi quem inprimis hæc coluere dedit.*

II.

*Jura monarchiæ, superos, Phlegetonta lacusque
Lustrando cecini voluerunt fata quousque:
Sed quia pars cessit melioribus hospita castris,
Auctoremque suum petiit felicior astris,
Hic claudor Dantes patriis extorris ab oris,
Quem genuit parvi Florentia mater amoris.*

These verses are said to have been made by *Dante* himself, *sed Musis parum faventibus*, and if he had not composed better in *Italian* he had not deserved the reputation of so great a poet. This city may boast of its antiquity and what it hath been, not what it is, and yet the cardinal legate, governor of *Romandiola*, usually resides here. It is very ill served with fish, notwithstanding it is so near the sea: there is scarce a good inn in town, it lying out of the way of travellers, and strangers, and being no thorough-fare. What was true of old is true still here; it's harder to get good water than good wine, *Sit cisterna mihi quam vinea malo Ravennæ*, the water being all brackish; neither yet

yet was the wine we met withal any of the best. I wonder this city should not be more populous and rich: the country, on the north side all along to *Faenza*, seeming to be fat and fertile land, and being planted after the manner of *Lombardy*. It lies indeed very low, yet I believe now a-days is never overflown.

We observed, in this journey from *Rome* to *Venice*, a great difference between the temperature of the air on this side, and on the other side the *Appennine* mountains; on the other side it being very temperate and warm, but on this side as cold and raw as it is at any time in winter with us, or indeed can well be in open weather; and that this cold did not proceed from a general change of weather since our coming on this side, we are well assured; for we heard of no such change, and we found snow lying here in the low grounds in many places, which on the other side was all melted and gone, even upon the hills, before our coming over. The reason of this is obvious, because this ridge of hills being higher than the lower region of the air, or place where the sun-beams are reflected, hinders the commixture of the warm southerly and western air with the cold northerly and eastern, but especially stopping on one hand the south and west winds, which else would drive the temperate air and tepid vapours into these parts; and, on the other hand, the cold northern and eastern blasts, which else would temper and much abate the warmth of those beyond the mountains. Hence I do not think incredible, nor much wonder at what is related by some travellers of a mountain in the *East-Indies*, on the one side whereof it is summer, when on the other it is winter.

We left *Ravenna*, and rode along the banks of the river *Montone* till we came within four or five miles of *Faenza*. The country on each side this river was much like to *Lombardy*. The river ran very swiftly, notwithstanding to the eye the country seem'd to be an exact level. From *Ravenna* to *Faenza* we had twenty long miles.

Faenza is a pretty little city, encompass'd with a strong brick wall, at present neglected and out of repair; famous for earthen ware made here, esteem'd the best in *Italy*. Before we enter'd the town we pass'd a little suburb,

suburb, and then the bridge, in the midst of which stands a tower. Upon St. *Thomas's* day yearly all the gentlemen of *Faenza* meet and choose magistrates for all the year, viz. eight *Antiani*, or senators, and a chief, who is called prior, for every month; so that for every year there are twelve several senates.

Imola.

From *Faenza* we travell'd on to *Imola* ten miles. The way was very streight; I suppose part of the *Via Æmilia*. About the mid-way between *Faenza* and *Imola* we passed through a little wall'd town called *Castel Bolognese*. Half a mile short of *Imola* we ferried over the river *Senio*.

Imola, anciently *Forum Cornelii*, is a lesser town than *Faenza*, hath a fair square piazza, with a cloister or *Portico* on one side it.

6.

Bologna.

We travell'd to *Bologna* upon the *Via Æmilia*.

In this side of *Italy* they have a custom to boil their wines to make them keep the better. The boil'd wine, which they call *Vin Cotto*, seem'd to us much stronger than the wine unboil'd, which they call *Vin Crudo*.

7.

Ferrara.

We took the *Florentine* procaccio's boat to *Venice*. Passing through nine *Sostegni*, we came to *Mal Albergo*, where we shifted our boat, going down from a higher to a lower channel, which brought us to *Ferrara*, which they reckon to be forty-five miles distant from *Bologna*. From *Ferrara* we were towed by a horse up a streight artificial channel to a place called *Ponte*, where we changed our boat again, coming into the river *Po*. In the *Po* we rowed down stream about twenty-seven miles to *Corbola*; where we shifted our boat the fourth time; not for any necessity of the place, as before, but because we then came into the *Venetian* territory, and so must take a *Venetian* boat. We went but two or three miles further down the *Po*, and then struck into a channel on our left hand, passing a sluice to a little town call'd *Loreo*, and, proceeding on about fifteen miles further, we pass'd near to *Chiozza*, a large town built among the *Lagune*, and *Pelestrina*, a village standing upon the *Argine* or *Lido*, we enter'd into the *Lagune* at the haven of *Malamocco*, and soon after arrived at *Venice*, Feb. 9. of which city we have already written as much as suffices for our purpose.

Chiozza.

We

We began our journey from *Venice* to *Geneva* by the *March* way of *Rhaetia* and *Switzerland*. Passing by boat to *Mestre* seven miles, and from *Mestre* to *Trevise* by coach twelve miles. At *Trevise* we took horses and a vitturine *Trevise* for *Trent*: in which journey we spent two days and an half, it being almost eighty miles riding. The first day we passed through *C. Franco* twelve miles, and then o-*Castel* ver a fair champaign country to *Bassano*, a very handsome *Franco* and pleasant walled town upon the river *Brenta*, over *Bassano* which there is a good bridge of wood. This town drives a great trade of weaving filks. ✓

As soon as we were past *Bassano* we enter'd among the mountains, going up beside the river *Brenta* fourteen miles, and lodged at *Pont Sigismund*. The second day we rode still up beside the river, and about two miles from *Ponte* we passed through a gate where we paid *Datii* to the archduke of *Inspruck*. At this pass is hewn out of the rock a box or little castle called *Cauolo*, a great height above the road, to which there is no avenue at all, but both the soldiers that kept it and all their provisions must be drawn up by rope and pulley, only there is a fountain of fresh water in it. Notwithstanding that this fortress belongs to the arch duke, yet the *Venetian* territory extends four or five miles further to a place called *Cauolo*. Sixteen miles riding brought us to a pretty little town called *Borgo*, and thirteen miles more to *Perzine* a rich *Perzine* and populous burgh, five miles short of *Trent*. Near this town is a good valley, but at our being there the snow was not melted. Between *Bassano* and *Ponte* the country on the left hand the river *Brenta* as we went up belongs to the *Sette Commune*, and on the right-hand to *Bassano*. Upon the river were several saw-mills, and a great quantity of timber floated down the stream to *Padua*. As soon as we got among the mountains we every where found stoves in the houses instead of chimnies. The plants we observed in this journey were *Erica Pannonica* 4. *Clus.* now in flower upon the sides of the mountains and the rocks plentifully: *Fumaria bulbosa*; *Leucium bulbosum vulgare* C. B. & *Leuc. bulbosum minus triphyllon* J. B.

We

16.
Trent.

We got early to *Trent*, a pretty little city, seated upon the river *Athesis* at the foot of the mountains, which do encompass it almost round, save the valley where the river runs. The inhabitants speak altogether *Italian*; and the *Venetian* money passes current among them, notwithstanding their present Prince is archduke of *Innsbruck*. Beside the north door of the *Domo* we found the monument of *Matthiolus* having on it these inscriptions.

Above,

*Herbarum vires nec rectius edidit alter,
Nec magis te clarus hac super arte fuit.
Si mens ut corpus depingi posset, imago
Una Dioscoridis Matthiolique foret.*

Under his effigies this,

D. O. M.

*Petro Andreae Matthiolo Senensi III Cæsarum
Ferdinandi, Maximiliani & Rudolphi Consiliario.*

Et Archiatro,

*Et Hieronymæ Comitissæ ex antiqua & Illustri
Castellanorum seu Comitum Varmi familia,
Ferdinandus Matthiolus Cæsari Ferdinando Auf-
triæ Archiduci, & Joanni Georgio Saxonæ Elec-
tori à consiliis & cubiculis medicus;
Apostolica & Imperiali auctoritatibus Sacri Pala-
tii Lateranen. Aulæque Cæsareæ comes,
Et armatæ militiæ eques auratus,
Una cum Maximiliano fratre
Anniversariis precibus institutis
Parentibus bene merentissimis PP. Ann. MDCXVII.
Vixit ille an. LXXVII.
Ann. Christi MDLXXVII. obiit Tridenti.
Vixit illa an. XXXII.
Obiit ibidem An. Dom. MDLXIX.*

Below this distich,

*Saxa quidem absument tempus, sed tempore nunquam
Interitura tua est gloria Matthiole.*

On

On the front of the choir is this following inscription concerning the council held in this city.

Sacrofanctum postremum Oecumenicum generale Concilium fuit in hac celeberrima civitate celebratum; & quidem sub Papa *Paulo III.* anno MDXLV, XIII Decembris pro felice inchoatione fuit facta Processio generalis per totam Urbem, ab Ecclesia Sanctissimæ Trinitatis ad hanc Ecclesiam Cathedralē; quā finitā primus Cardinalis Præsidens, qui postea fuit Papa *Julius III.* [prout etiam alter Card. Præsidens fuit Papa *Marcellus II.* nominatus] in hoc loco eminentiore, tunc magis amplo, ad celebrandum Concilium & Sessiones faciendas deputato, ad altare S. & Gloriosissimi martyris *Vigilii* hujus Ecclesiæ patroni celebravit missam de Spiritu S. Ac reliquis cæremoniis peractis fuerunt sub D. *Paulo III.* celebratæ octo publicæ Sessiones cum decretis, & aliæ tres ob vastam pestem in hac Urbe grassantem *Bononiæ*, ubi nihil fuit decretum, Anno MDXLVII. Postea cessante peste & bellis fuit reductum hoc Consilium, & in hoc eodem loco fuerunt Papa sub *Julio III.* celebratæ aliæ publicæ sex Sessiones cum Decretis Annis 1551, 1552, quibus interfuerunt tres Serenissimi Principes Ecclesiastici, S. R. I. Electores Archiepiscopi, *Moguntinus, Trevirensis, Colonienfis,* 1 Die Septemb. 1551. hanc Urbem ingressi; prout etiam Serenissimus Elector *Brandenburgensis* duos oratores huc ablegavit. Demum sub Papa *Pio IV.* Anno 1561 & 1563. fuerunt celebratæ ultimæ novem publicæ Sessiones cum Decretis in Ecclesia S. *Mariæ* majoris hujus urbis, istius Ecclesiæ Reverendissimo Capitulo incorporata, sicuti etiam Ecclesia S. Petri. Et nihilominus ad pedes Sanctissimi Crucifixi tum in hoc loco existentis & nunc aliò translati pro Decretorum corroboratione semper fuerunt publicata omnia dicti Concilii Decreta. Interfuerunt sub dictis summis Pontificibus celebrationi Cardinales Legati 13, inter quos *Christophorus Madrucius*; non Legati 4, inter quos *Ludovicus Madrucius*: Oratores Principum totius Europæ 29: Patriarchæ 3: Archiepiscopi 33: inter quos Archiepiscopus *Rossanensis*, qui postea fuit *Urbanus VII.* nominatus: Episcopi 233: Abbates 18: Generales ordinum 12. Theologia

logiæ Doctores 148 : Procuratores 18 : Officiales Concilii 3 : Cantores 9 : Notarii 4 : Cursores Papæ 2.

Sacrofancto Spiritui S. omnium Conciliorum directori sacratissima Die Pentecostes, Anno 1639, dicatum.

Here are no remarkable churches or other buildings. The bishop is both spiritual and temporal Prince. Under him there is a governor, who yet can do nothing without the council, which consists of eight persons, viz. the *Podesta* or mayor of the city; the *Capitaneo*, two canons of the church, and four gentlemen or citizens. All these are nominated and appointed by the bishop, and continue in power during life, *modo bene se gesserint*. There be 14 canons belonging to the cathedral, all noblemen, and by these the bishop is chosen. The bishop's name then was *Sigismundus* earl of *Tirol*, commonly called Archduke of *Inspruck*.

Of the natural Abilities, Temper and Inclinations, Manners and Customs, Virtues and Vices of the Italians.

THE *Italians* are, by the general confession of all that write of them, ingenious, apprehensive of any thing, and quick-witted. * *Barclay* (who is not too favourable to them in the character he gives of them) saith, they have *animum rerum omnium capacem*; and again, that there is nothing so difficult *ad quod Italici acuminis præstantia non tollatur*.

* *Icon. anim.*

They are patient and assiduous in any thing they set about or desire to learn, never giving over till they master it and attain the perfection of it.

They are a still quiet people, as being naturally melancholy; of a middle temper, between the fastuous gravity of the *Spaniard*, and unquiet levity of the *French*, agreeing very well with the *English*, as the *Scots* are observed to do with the *French*, and *Spaniards* with the *Irish*.

They are very faithful and loving to their friends, mindful of a courtesy received, and if it lies in their way

way or power, for one good turn will do you two. This I had from a very intelligent person, who hath lived and conversed long enough among them to know them thoroughly. *Barclay* himself confesseth, that where they do truly love *omnia discrimina habent infra tam humani fœderis sanctitatem*. Understand it of the better sort; for shopkeepers and tradesmen are false and fraudulent enough; and innkeepers, carriers, watermen, and porters as in other places horribly exacting, if you make not an explicit bargain with them before-hand, inso-much that in many places the state hath thought it necessary, by publick *Bando* and decree, to determine how much inn-keepers shall receive of travellers for their dinner, and for their supper and lodging.

They are not easily provoked, but will bear long with one another; and more with strangers than their own country-men. They are also very careful to avoid all occasions of quarrel; not to say or do any thing that may offend any person, especially not to abuse any one by jesting or drollery; which they do not like, nor can easily bear.

No people in *Europe* are more scrupulous and exact in observing all the *punctilio's* of civility and good breeding (*bella creanza*) they call it) only methinks the epithets they bestow upon mean persons are somewhat extravagant, not to say ridiculous, as when they stile a mechanick or common tradesman *Signor molto magnifico*, and the like.

When they are in company together, they do not only give every man his turn of speaking, but also attend till he hath done, accounting it a piece of very ill breeding to interrupt any man in his discourse, as hating to be interrupted themselves. Contrary to the manner of the *French* and *Dutch*, who make no scruple of interrupting one another, and sometimes talk all together. As careful are they, not to whisper privately one to another when in company, or to talk in an unknown language, which all the company understands not. They do also shew their civility to strangers in not so much as asking them what religion they are of, avoiding all unnecessary disputes about that subject, which are apt to engender quarrels; which

thing we could not but take notice of, because in *France* you shall scarce exchange three words with any man, before he ask you that question.

It is not easy for a stranger to get acquaintance and familiarity with the *Italians*, they not much delighting to converse with strangers, as not knowing their humours and customs. Yet is their conversation when gotten pleasant and agreeable, their discourse profitable and carriage obliging.

Most of them, even of the ordinary sort of people, will discourse intelligently about politick affairs, and the government and interest of their own country; being much addicted to, and delighted in politick studies and discourses.

Most of them are very covetous of liberty, especially such cities as have been formerly commonwealths, discourses or treatises of that subject making deep impressions on their minds; so that in some places not only books but also discourses about former revolutions are prohibited. *Barclay* also saith, that they are *gloriosæ libertatis cupidi, cujus adhuc imaginem vident*. Hence the Princes of *Italy* build store of castles and citadels in their territories, not so much to defend themselves against their enemies as to bridle their subjects, and secure themselves against tumults and insurrections. A strange thing it is, that of all the people of *Italy*, the *Neapolitans*, who never tasted the sweetness of liberty, nor mended their condition by their commotions, but always (as we say) *leap'd out of the frying-pan into the fire*, should be the most tumultuous and given to rebel against their Princes. *Leti* tells us of one of those petty subordinate Princes in this kingdom of *Naples*, called *Thomaso Ferrari*, who governed his subjects not like vassals, but with that sweetness and gentleness, as if they had been his own children; yet some of these fellows taking arms come into their Prince's presence, and say to him, *Sir Prince, we are come to drive you out of your palace, and burn all your moveables*. *Why* (answers the Prince) *can you find fault with my government? Are you aggrieved in any thing and it shall be redressed*. No (replied they) *but because we understand that many of our country-men have revolted from their lords,*

lords, we also to shew, that we love revolutions, are resolved to rebel against you.

The *Italians* are greatly delighted in pictures, statues, and musick, from the highest to the lowest of them, and so intemperately fond of these things, that they will give any rate for a choice picture or statue. Though all of them cannot paint, or play on the musick, yet do they all affect skill and judgment in both: and this knowledge is enough to denominate a man a *virtuoso*. Many of them are also curious in collecting ancient coins and medals.

They are great admirers of their own language, and so wholly given to cultivate, polish, and enrich that, that they do in a great measure neglect the *Latin*, few of them now a-days speaking or writing well therein; but mingling so many *Italian* idiotisms with it, that you have much ado to understand what they speak or write. As for the *Greek*, few or none have any tolerable skill in it, the study thereof being generally neglected and laid aside.

They are very temperate in their diet, eating a great deal of sallat and but little flesh. Their wine they drink well diluted with water, and seldom to any excess. We saw only one *Italian* drunk by the space of a year and half that we sojourned in *Italy*. Whether it be that in hot countries men have not so good stomachs as in cold; or whether meat, as being better concocted, nourishes more there; or that the *Italians* are out of principle, temper, or custom more sober and temperate than other nations. Their herbs seemed to me more savory and better concocted than ours. Their water also was not so crude. But for flesh ours, in my judgment, much excels theirs, being much more succulent and sapid. Yet in *Rome* have I eaten beef not inferior to ours: but I suppose it might be of *German* oxen; of which (as we were inform'd) there are many driven thither: and for sucking veal the *Romans* (as we have already noted) think theirs preferable to any in the world.

The *Italians*, especially those of inferior quality, are in all things very sparing and frugal: whether it be because they are so educated and accustom'd, or because the gabels and taxes which they pay to their governors

are so great, that they cannot afford to spend much on themselves; or because, naturally loving their ease, they had rather live nearly than take much pains.

The nobility and great persons choose rather to spend their revenues in building fair palaces, and adorning them with pictures and statues; in making stately and spacious orchards, gardens, and walks; in keeping coaches and horses, and a great retinue of servants and staffiers, than in keeping great houses and plentiful tables; giving board-wages to their servants and attendants, which in my opinion is the better way of spending estates, these things finding poor people employment, so that the money comes to be distributed among them according to their industry; whereas the other way maintains in idleness such persons for the most part as least deserve relief: those that are modest and deserving choosing rather (if possibly they can) to maintain themselves and their families by the labour of their hands, than hang about great houses for a meal's meat. Besides that great house-keeping is very often, not to say always, the occasion of great disorder and intemperance. Were I therefore God's steward for a great estate (for such all rich men are or ought to be) I should think it more charity to employ poor people, and give them money for their work, than to distribute my estate among them freely, and suffer them to live in idleness; I mean such as are able to labour.

The inferior gentry affect to appear in publick with as much splendor as they can, and will deny themselves many satisfactions at home, that they may be able to keep a coach, and therein make the *tour à la mode* about the streets of their city every evening.

The *Italians* when they call, speak to, or of one another, use only the christian name, as *Signor Giacomo*, *Signor Giovanni*, &c. unless it be for distinction's sake; so that you may converse among them, perchance, some months before you hear any man's surname mention'd.

The *Italian* gentry live for the most part in the cities, whence it is that the cities are so splendid and well built, so populous and rich, and the country so poor and thinly inhabited. Yet are the noblemen's palaces rather great and stately, than commodious for habitation. In many cities

cities the paper windows (which are for the most part tatter'd and broken) disgrace the buildings, being unsuitable to their magnificence.

The houses are generally built of stone, thick-wall'd and high-roof'd, which makes them warm in winter, and cool in summer: but they contrive them rather for coolness than warmth, and therefore they make the windows large to give them air enough.

Of the gentry in *Italy*, especially in *Venice*, if there be many brothers of one house, only one usually marries, and that the eldest, if he pleases: if he be not disposed, then any other, as they can agree among themselves. The rest do what they can to greaten him that is married, to uphold the family. The brothers that marry not keep concubines or whores; which though it be a sin, yet their confessors can easily absolve them of it.

In most of the cities and towns of *Italy* there are *Academies* or societies of *Virtuosi*, who have at set times their meetings and exercises, which are for the most part prolusions of wit and *Rhetoric*, or discourses about moral subjects, curious questions and problems, or paradoxes, sometimes extemporany, sometimes premeditated. These have their head whom they call Prince, and a certain number of academists, who are chosen by balloting, but they seldom refuse any that offer themselves to election. Many of these academies assume to themselves conceited or fanciful names, and take a suitable *impresa* or coat of arms; as for example the *Academists* of *Bergamo* call themselves *Eccitati*, and their *impresa* is the picture of the morning. In *Mantua* the academists called *Accesi* have taken for their emblem a looking-glass reflecting the sun-beams; those called *Timidi* a hare. As for the other cities of *Italy*, in *Rome* there are three *Academies*, the *Humoristi*, the *Lyncei*, and the *Fantastici*: in *Padua* three, the *Ricovirati*, *Infiammati*, and *Incogniti*: in *Bologna* three, *Ardenti*, *Indomiti*, and one innominate: in *Venice* two, *Discordanti* and *Gussoni*: in *Naples* two, *Ardenti* and *Intronati*: in *Luca* two, *Oscuri* and *Freddi*: in *Florence* *la Crusca*: in *Siena* *Intronati*: in *Genoa* *Addormentati*: in *Vicenza* *Olympici*: in *Parma* *Innominati*: in *Pavia* *Affidati*: in *Milan* *Nascosti*: in *Ferrara* *Elevati*: in *Rimini* *Adagiati*: in *Cesena* *Offuscati*: in *Ancona* *Caliginosi*.

luginosi: in *Fabiano Disuniti*: in *Perugia Insensati*: in *Viterbo Ostinati*: in *Brescia Occulti*: in *Faenza Philoponi*: in *Treviso Perseveranti*: in *Fermo Raffrontati*: in *Verona Philharmonici*: in *Macerata Catenati*: in *Alessandria Immobili*: in *Urbino Afforditi*.

Most of the *Italians* of any fashion wear black or dark coloured cloths, and for the fashion of them follow the *French* (but not too hastily) excepting those countries which are subject to the King of *Spain*, which use the *Spanish* habit.

As for their vices, they are chiefly taxed for three.

1. *Revenge*; they thinking it an ignoble and unmanly thing to put up or pass by any injury or affront. Many times also they dissemble or conceal their displeasure and hatred under a pretence of friendship, that they may more easily revenge themselves of whom they hate by poisoning, assassinating, or any other way; for nothing will satisfy them but the death of those who have injured them: and there be *bravo's* and cut-throats ready to murder any man for a small piece of money. Besides, which is worst of all, they are implacable, and by no means to be trusted when they say they pardon. Hence they have a proverb among them, *Amicitie reconciliatæ & menestre riscaldatæ non furono mai grate*. The women also provoke their children to revenge the death of their fathers by shewing them the weapons wherewith they were murdered, or cloths dipp'd in their blood, or the like, by which means feuds between families are maintained and entail'd from generation to generation. These are the qualities for which we usually say, an *Englishman Italianate* is a devil incarnate.

2. *Lust*, to which the inhabitants of hot countries are by the temper of their bodies inclined. Hence it is that all cities and great towns do so swarm with courtezans and harlots; and to avoid worse evils, the State is necessitated to give them public toleration and protection. As for masculine venery and other works of darkness, I shall not charge the *Italians* with them, as not having sufficient ground so to do; and because (as *Barclay* saith) *Hæc scelera tenebris damnata & negari facilius à consciis possunt, & ab æmulis fingi*.

3. *Jealousy*

3. *Jealousy*, which strangely possesses this people; so that for every little suspicion they will shut up their wives in a chamber, and carry the key with them, not suffering them to stir abroad unless themselves accompany them. To salute an *Italian's* wife with a kiss is a stabbing matter; and to call a man *cornuto* or cuckold in good earnest is the greatest affront or disgrace you can put upon him. The married women in *Italy* by this means have but bad lives, being for the most part confined to their houses except when they go to church, and then they have an old woman attending them: the doors of their houses shut up at dinner and supper; all visits and familiar discourses with men denied them; neither can they speak or smile without suspicion: one reason of this among others may be, because the husbands knowing themselves to be so dishonest and false to their wives, they presume that had they opportunity they would not be more true to them. And yet for all this guarding and circumspection are not the *Italian* dames more uncorrupt than the matrons of other nations, but find means to deceive their husbands, and be dishonest in spite of jealousy.

To these I might add *Swearing*, which is so ordinary among all sorts, the priests and monks themselves scarce abstaining from oaths, that I believe they account it no sin.

It is a general custom all over *Italy* to sleep an hour or two after dinner in summer-time; so that, from two of the clock till four in the afternoon, you shall scarce see any body stirring about the streets of the cities. Indeed if one sits still it is very hard to keep his eyes open at that time. Either this custom did not prevail when the school of *Salerno* wrote their physick precepts, or that direction, *Sit brevis aut nullus tibi somnus meridianus*, was calculated for *England*, to whose King that book was dedicated. And yet the *Italian* physicians still advise people either not to sleep at all after dinner, or if they must sleep, to strip of their cloths and go to bed, or only to take a nod in their chair sitting.

In many cities of *Italy* are hospitals where pilgrims and poor travellers are entertained, and have their diet and lodging for three days (if they have reason to stay

so long) *gratis*, besides a piece of money when they go away.

There are also hospitals to receive exposed children, if I may term them; that is, any without exception that shall be brought and put in at a grate on purpose, whither upon ringing a bell an officer comes presently and receives the child, and asking the party that brought it, whether it hath been baptized? carries it to a nurse to give it suck; and there it is maintained till it be grown up. The place where it is put in is so strait as to admit only children new born or very young. This I look upon as a good institution in great cities, taking away from women the temptation of murdering their new born children, or destroying their conceptions in the womb, to hide their shame. I know what may be objected against it, *viz.* that it emboldens them to play the wantons, having so fair a way of concealing it: *Sed ex malis minimum.*

In *Rome, Venice*, and some other cities of *Italy* they have a way of exercising charity little used among us. Several confraternities of well-disposed persons raise sums of money by a free contribution among themselves, which they bestow yearly in portions for the marrying of poor maids, which else might want husbands, and be tempted to dishonest practices to maintain themselves. This I look upon as well-plac'd alms and worthy the imitation; it being very convenient and in a manner necessary, that new-married people should have somewhat to furnish their houses and begin the world with; and no less fitting, that young persons should be encouraged to marry, as well for multiplying of people, wherein the strength of the commonwealth chiefly consists, as for the preventing those evils to which young and single persons are strongly tempted and inclined.

It is a troublesome thing to travel with fire-arms in *Italy*, you being forced in most cities to leave them at the gate with the guard, who give you a tally or token; and when you leave the city you bring your tally and receive your arms. This is done to prevent assaults and murders, which are so frequent in many cities of *Italy*. For this the Great Duke of *Tuscany* is much to be commended, there being no such murders and outrages committed in
any

any of the cities under his dominion as in other places: so diligent is he in searching out, and severe in punishing *bravo's*, cut-throats, assassins, and such kind of malefactors. As much might be said for the Pope in the city of *Rome*, but in other cities in his territories there is killing enough.

When you depart from any city you must be sure to take a *bill of health* out of the office that is kept every where for that purpose: without which you can hardly get to be admitted into another city, especially if it be in the territory of another Prince or State. If any one comes from an infected or suspected place, he is forced to keep his *quarantain* (as they call it) that is, be shut up in the *lazaretto* or pest-house forty days before he be permitted to come into the city. So scrupulously careful are they to prevent contagion.

In *Rome* and other cities of *Italy* we have often observed many labourers that wanted work, standing in the market places to be hired; whither people that want help usually go and bargain with them. Which custom illustrates that parable of our *Saviour* recorded in the beginning of the xxth chapter of *St. Matthew's* gospel, wherein the householder is said to go out about the third hour, and see others standing in the market-place, ver. 3. and in ver. 6. he is said to find others about the eleventh hour, and to say to them, *why stand ye here all the day idle*; and ver. 7. they answer, *because no man hath hired us*.

In *Italy* and other hot countries so soon as they have cut down their corn they thresh and winnow it usually, or at least a great part of it, on a floor made in the open air, before they bring it into the house. Hence in the scripture we read of threshing floors as open places without roof or cover. Such I suppose was that where *Boaz* winnowed barley, *Ruth* iii. 3. Neither is it any wonder that he should lie there all night: for at *Aleppo* and even in *Malta* in summer-time they set their beds upon the roofs of their houses, and sleep *sub Dio*, in the open air.

One custom we have in *England*, which (as far as I could observe) is no where used beyond the seas, and that is for children to beg their parents and godfathers blessing upon the knee.

One custom, which prevails generally in foreign countries,

tries is but little used in *England*, that is, to salute those that sneeze by vailing the bonnet, and praying God to bless, assist, or defend them, &c.

There is a kind of sport or game much used this day by the *Italians*, called *Gioco di mora*, which seems to have been used by the ancients and called *micare digitis*. It is for the most part between two, who put out just at the same time each of them as many fingers as they please, and also name each of them what number he thinks fit; and if either of them happens to be the number of the fingers which both of them together threw out, then he that names that number wins one.

*Several Sorts of Meats, Fruits, Sallets, &c.
used in Italy, and other Observations about
Diet.*

1. **I**N *Lombardy* and other parts of *Italy*, *Tartufale* (as they call them) i. e. *Tubera Terræ*, a kind of subterraneous mushroom, which our herbarists *English Trubs*, or after the *French* name *Truffles*, are accounted a choice dish, held by naturalists to be incentive of lust. The best of all are gotten in *Sicily*, and thence sent over into *Malta*, where they are sold dear. The way to get them is to turn swine into a field where they grow, who find them by the smell, and root them up out of the ground, and set one to follow the swine, and gather them up.

2. *Snails* boiled and served up with oil and pepper put into their shells are also accounted a good dish: I am sure they are sold dear at *Venice* and elsewhere, especially the great whitish or ash-coloured shell-snails, which we had not then seen in *England*, but have since found plentifully upon the downs near *Darking* in *Surry*, whither (as we were informed by the honourable *Charles Howard, Esq;*) they were brought from beyond seas by

Mr. *Martin Lister* hath found them on the banks of that hollow lane, leading from *Puckeridge* to *Ware*. These snails before winter stop up the mouth or aperture of

of their shells with a thick hard white paste like a good lute or plaister, and are kept all winter in barrels or other vessels, and sold by the poulterers. The first place where we met them to be sold in the market was *Vienna* in *Austria*, where they imitate the *Italians* as well in their diet as in the manner of their buildings.

3. *Frogs* are another *Italian* viand which we in *England* eat not. These they usually fry and serve up with oil. At *Venice* they eat only the loins and hind-legs, as also at *Florence*, and that upon fish-days. In some places of *Lombardy* they eat their whole bodies, and besides their frogs are of a larger size than ordinary. Their flesh shews white and lovely as they lie in the markets skinn'd, and ready prepared to be fried. Howbeit even there in *Italy*, *Kircher* in his book *de Peste* condemns them as an ambiguous and dangerous meat, and I think deservedly; wherefore we do well, having plenty of better food, wholly to abstain from them.

4. *Land Tortoises* are accounted with them a better meat than sea-tortoises, and are commonly to be sold in the markets. They are eaten by those orders of friars whose rule obliges them to abstain from flesh, as *Carthusians*, *Carmelites*, &c.

5. They eat also many sorts of *Shell-fish*, which we either have not or meddle not with, as purples, periwinkles of several sorts, *Patellæ* or limpets, sea-urchins, which last are to be found every day in the markets at *Naples*. They also eat the sea-tortoises, of which the blood put into the stomach and boiled is the best part.

6. *Paste* made into strings like pack-thread or thongs of white-leather (which if greater they call *Macaroni*, if lesser *Vermicelli*) they cut in pieces and put in their pots as we do oat-meal to make their *menestra* or broth of, much esteemed by the common-people. These boiled and oiled with a little cheese scraped upon them they eat as we do buttered wheat or rice. The making of these is a trade and mystery; and in every great town you shall see several shops of them.

7. They scrape or grate *Cheese* upon all their dishes even of flesh; accounting that it gives the meat a good relish; which to those that are unaccustomed makes it rather nauseous or loathsome.

8. *Chestnuts*

8. *Chestnuts* roasted and the kernels served up with juice of lemon and sugar are much esteemed, and by some called the *Pistachio's* of *Italy*. At *Bononia* they grind them and make little cakes of the flower of them, which though eaten by the poor are no desirable dainty to a delicate palate. Roasted chestnuts are a great part of the diet of the poor peasants in *Italy*; as we have elsewhere noted.

9. They eat all manner of *small birds* as well as the *Germans*, viz. *wrens*, *stares*, *titmice*, *butcher-birds*, &c. and several great ones which we touch not in *England*, as *magpies*, *jays*, *wood-peckers*, *jack-daws*, &c. nay we have frequently seen *kites* and *hawks* lying on the poulterers stalls; as we have already noted in our description of *Rome*.

10. They use several herbs for *Sallets*, which are not yet, or have been but lately used in *England*: v. g. *Selleri*, which is nothing else but sweet smallage, the young shoots whereof, with a little of the head of the root cut off, they eat raw with oyl and pepper: in like manner they eat fennel; artichoke also they eat raw with the same sauce; [the same part of it that is eaten boil'd.] In *Sicily* at the highest village upon that side mount *Ætna* that we ascended, they gave us to eat for a sallet the stalks of a tall prickly thistle, bearing a yellow flower, I suppose it was the *Carduus Chrysanthemus* Dod. which the rankness of the soil had caused to mount up to that stature. Besides, in most of their sallets they mingle rocket (*Rachetta* they call it) which to me gives them an odious taste. *Curl'd Endive* blanch'd is much used beyond seas; and for a raw sallet seemed to excel lettuce itself; besides it hath this advantage, that it may be kept all winter.

11. Many *fruits* they eat, which we either have not, or eat not in *England*, v. g. *Fujubes*, sold by the hucksters while they are yet green: *L'azarole*, the fruit of the *Mespilus Aronia*, of a pleasant acid taste: both fruit and tree exactly like the common hawthorn, but bigger. *Services* or *Sorbes* the true, as big as little pears; those that grow with us are the fruit of the *Sorbus terminalis*: *Green figs* both white and blue in great plenty; a most delicate fruit when fully ripe, comparable for the

the taste to the best marmalade, and which may be eaten freely without danger of surfeiting: The husks or cods of *Carobs*, called in *Latin Siliqua dulcis*, in *Greek κρηττα*, the word used *Luke xv. 16*, and therefore by some supposed to be the husks the prodigal is said to have desired to fill his belly with. Indeed we thought them fitter meat for swine than men; for though they had a sweet taste, yet afterwards they troubled our stomachs and purged us: but they have not upon all men the like effect; for the *Italians* and *Spaniards* eat them ordinarily without any such trouble: *Love-apples*: *Mad-apples* both raw and pickled: *Water-melons*; which they use to eat to cool and refresh them, and some physicians allow sick persons to eat them in fevers. They are almost as big as pumpions, have a green rind and a reddish pulp with blackish seed when ripe. The *Italians* call these *Cucumeri*, whereas cucumbers they call *Citrulli*. Several sorts of gourds, as *Cucurbita lagenaria*, and *Cucurbita flexuosa sive anguina*; which eats very well boil'd in pottage: *Cucumis anguinus*, which is more esteemed and indeed better tasted than the cucumber. The common people both in *Italy* and *Sicily* eat green chick-pease raw, as our people do common pease.

12. In their dyserts and second courses they commonly serve up pine-kernels, and in time of year green almonds: also a kind of sweet-meat or confection made up of mustard and sugar, which they call *Italian mustard*.

13. To cool and refresh their wines, they use generally snow, where it may easily be had, else ice, which they keep in conservatories all summer. Without snow they that are used to do it do not willingly drink, no not in winter.

14. In the kingdoms of *Naples* and *Sicily* they make a sort of cheese which they call *Caseo di cavallo*, i. e. horse-cheese, for what reason I could not learn. These cheeses they make up in several forms; some in the fashion of a blown bladder, some in the fashion of a cylinder, and some in other figures. They are neither fat nor strong, yet well tasted and acceptable to such as have eaten of them a while. The pulp or body of them lies in flakes, and hath as it were a grain one way

way like wood. They told us that they were made of buffles milk, but we believed them not, because we observed not many buffles in those countries, where there is more of this cheese made than of other forts.

15. In *Italy* and other hot countries, their meat is not only naturally more lean and dry than ours, but they roast it also till it be ready to fall from the bones, and there be little juice left in it. Besides, when they roast their meat, they draw coles under the spit, and let the fat drop on them, the *nidor* whereof perfumes the meat, but not to our gust who are not used to it, and what they lose in dripping they save in fewel. Their roasting differs not much from our broiling or carbonading. I speak this of ordinary inns and mean peoples houses, in great houses and inns it is otherwise.

The *Italians* count not their hours as we do, from twelve to twelve, beginning at mid-day and mid-night; but from one to four and twenty, beginning their count at sun-set, which is a much more troublesome way; the setting of the sun being a moveable point or term, and they being therefore necessitated to alter and new-set their clocks every day: whereas mid-day and mid-night being fix'd points, the clocks need no setting a-new. As for *Italy* in general, though the *Italians* imagine it to be the best country in the world, and have a proverb among them that *Italy is the garden of the world*: yet setting aside *Lombardy*, *Campania felix*, and some few other places, the rest is mountainous and barren enough: the earth so parched by the sun-beams that it bears no grass, and (as *Barclay* saith) seldom yieldeth grain enough for three years successively to supply the necessities and uses of its inhabitants, whatever they may boast of the *Itala gleba*. The reason why the *Italians* are so conceited of their own country is, because they seldom travel abroad, and so see not the beauty and fertility of others.

I might have taken notice of the vast and incredible number of religious houses there are in *Italy*. I have sometimes thought they might in all of both sexes amount to eight or ten thousand. Of these the gentlemen

men make advantage. For such of their daughters as either they cannot get husbands for, or are not able to give portions to, suitable to their birth and quality, they can in one of these houses for a small matter honourably dispose of and settle for their lives. The institution of such houses as these, whither young women of quality, who for want of sufficient fortunes or personal endowments cannot easily provide themselves suitable matches, might retire and find honourable provision, might perchance be tolerable, yea commendable, were they purged from all superstition, the women not admitted too young, and under no vow of perpetual chastity, only to leave the house in case they married. But because of the danger of introducing monkery, I think it more safe for a Christian state not to permit any such foundations.

Buffles are a common beast in *Italy*, and they make use of them to draw their wains as we do of oxen: only because they are somewhat fierce and unruly, they are forced to lead them by an iron-ring put in their noses, as our bear-wards do their bears.

1. The *Cicada* before mentioned.

2. The flying glow-worms, which are there every where to be seen in summer time. These flying or winged glow-worms are nothing else but the males of the common creeping or unwinged glow-worm. *Fabius Columna* relates, that *Carolus Vintimiglia* of *Palermo* in *Sicily*, having out of curiosity kept many unwinged glow-worms in a glass, did put in among them a flying one, which presently in his sight did couple with them one by one after the manner of silk-worms, and that the next day the unwinged ones or females began to lay their eggs. That the males are also flying insects in *England*, though they do but rarely or not at all shine with us, we are assured by an eye-witness; who saw them in conjunction with the common shining unwinged glow-worms. Here by the way it may not be amiss to impart to the reader a discovery made by a certain gentleman and communicated to me by *Francis Jessop* Esq; which is, that those reputed meteors call'd in Latin *Ignes fatui*, and known in *England* by the conceited names of *Jack with a Lantern*, and *Will with a Wisp*, are nothing else but swarms
of

of these flying glow-worms. Which if true, we may give an easy account of those strange *Phænomena* of these supposed fires, viz. their sudden motion from place to place and leading travellers that follow them into bogs and precipices.

3. *Scorpions*, which in *Italy* sting not, or at least their stings are not venenose, as the learned *Franciscus Redi* affirms; though by experience he found the stinging of the *African* scorpions to be mortal or at least very noxious.

4. *Tarantula's*, so called because found about *Tarentum*. (though we have seen of them at *Rome*) which are nothing else but a large sort of spiders; the biting whereof is esteemed venomous, and thought to put people into phrenetick fits, enforcing them to dance to certain tunes of the musick, by which means they are cured, long and violent exercise causing a great evacuation by sweat. These fits they say do also yearly return at the same season the patient was bitten. But *Dr. Thomas Cornelius* of *Cosenza* before mentioned, a learned physician and virtuoso in *Naples*, diligently enquiring into this generally received and heretofore unquestioned story, that he might satisfy himself and others whether it were really true in experience.

5. *Cimici*, as the *Italians* call them, as the *French* *Punaise*. We *English* them chinch, or wall-lice, which are very noisome and troublesome by their bitings in the night-time, raising a great heat and redness in the skin. They harbour in the straw of the bolsters and mattresses, and in the wood of the bedsteads; and therefore in some *Nosocomia*, or hospitals for sick persons, as for example, at *Genoa* the bedsteads are all of iron. This insect, if it be crush'd or bruis'd, emits a most horrid and loathsome scent, so that those that are bitten by them are often in a doubt whether it be better to endure the trouble of their bitings, or kill them, and suffer their most odious and abominable stink. We have of these insects in some places of *England*, but not many, neither are they troublesome to us.

We departed from *Trent*, intending for *Coira* or *Chur* in the *Grisons* country, called in *Latin* *Curia Rhætorum*. We rode up the valley where the river *Athesis* runs, call'd *Val Venosta*, every five miles passing through a large vil-
lage,

lage, and one handsome little town called *Burgo*, and lodg'd at a small place call'd *Brunsole*.

We rode through *Bolzan*, a considerable town, and, 19.
for bigness, comparable to *Trent*; and ten miles further *Maran*, a large town, and lodg'd at a village called *Maran*.
Raveland.

We pass'd through *Latourn*, *Slach*, *Schlanders*, *Maltz*, 20.
all villages and towns of note; and last of all *Cleurn*, a pretty great walled town, and then struck up on the left hand among the mountains to a village called *Tavers*, where we lodg'd.

We rode on through the snow to *Monastero*, where 21.
the *Grisons* country begins, and *St. Maria*, a small *terra*, and stopp'd at *Gherf*, a village at the foot of the high mountains. In this country the people use a peculiar language of their own, which they call *Romansch*, that is, *Lingua Romana*. It seems to be nearer *Spanish* than *Italian*, though distinct from both. Besides their own language they generally speak both *Italian* and *Dutch*: so that after we had lost *Italian* in the vallies, we wonder'd to find it here again among the hills. Their wines they bring all out of the *Valtelline*, from *Tirano*, about two days journey distant. The country at this time was all over cover'd with snow, so that they are fain to keep their cattle within doors for six months: yet the people said that hereabouts the snow did not lie all summer, no not on the tops of the highest mountains. Here we observed that, to draw their sleds over the snow, instead of oxen they made use of bulls, one bull drawing a little sled. About *Tavers* we observ'd them sowing of dust upon the snow, which they told us was to make the snow melt sooner: I suppose it was rather for manure.

They use stoves in all places, and good reason they have, the country being so cold. A great number of *Chamois* or *Gemps* [*Rupicapra*] are taken all over these countries upon the high hills, as, though the people had not told us, we must needs have gather'd from the multitude of horns we saw stuck up in the houses where we lodged. Bears there are, and wolves among the high mountains, but not many. The men generally wear ruffs and long bushy beards. All the people (as far as

A a

we

we had experience, or could judge of them in the short stay we made among them) we found to be honest, hearty, and civil, and the common sort very mannerly. Their houses are built of stone, and cover'd with shingles of wood, the walls thick, and the windows very small to fence against the cold. They have no strong holds or fortified places among them; nor will they permit any to be erected; having so much confidence in their own valour, that they think they need no other defence: indeed their country is such as one would think none of their neighbouring Princes should covet, unless for the security of his own territories.

22. We passed the mountain of *Bufalora* in seven or eight hours. In the top of the mountain, in the mid-way between *Cherf* and *Zernetz*, is an inn called *Furno*. From *Zernetz* we rode in the valley of the higher *Engadine* through *Zuotz*, a great *terra*, and two other villages, and lodg'd at a little place called *Ponte*.



we had experience, or could judge of them in the short stay we made among them) we found to be honest, hearty, and civil, and the common sort very mannerly. Their houses are built of stone, and cover'd with shingles of wood, the walls thick, and the windows very small to fence against the cold. They have no strong holds or fortified places among them; nor will they permit any to be erected; having so much confidence in their own valour, that they think they need no other defence: indeed their country is such as one would think none of their neighbouring Princes should covet, unless for the security of his own territories.

OF THE GRISONS.

THE GRISONS are divided into three leagues, and each league subdivided into *Communes*: each *Commune* contains several villages; not all an equal number, but some more, some fewer. The *Lega Grisa* (according to *Simler*) hath nineteen *Communes*. The *Lega della casa di Dio* hath twenty one *Communes*, which are sometimes contracted into eleven. *Cleurn*, *Tavers*, and *Maltz* have lately revolted from this league, and put themselves under the archduke of *Innsbruck*. The *Dieci Dritture* have ten, as the name imports. Each *Commune* hath its annual chief magistrate, whom in some places they call *Maestrale*, and a certain number of assessors or judges, which in their language are called *Truæder*. Each *terra* or village chuses its judges by majority of votes. [Sometimes the people chuse only a certain number of delegates, which delegates are to make choice of the judges.] All the people, as well rich as poor, as well servants as masters, have their suffrages so soon as they come to the age of fifteen years. The time of their election is *St. Matthias's* day. The *Commune* of *Engadina alta* hath ten great villages (*terre* they call them) sixteen judges called *Truæder*, one *Maestrale*, one chancellor or notary. The *Maestrale*, the chancellor, and four *Truæder* are always of *Zuotz*. The other *terre* have some one, some twp, according to their bigness. [In other communities the several *terre* have the *Maestrale* and other officers by turns.] These magistrates are changed every two years, but confirmed every year, and may be put out by the people if they please. The *Maestrale* (called in some places *Landam-*

man) is the chief, and assembles the *Truæder* together, makes processess, and in sum hath the executive power. When they have occasion to meet to decide any business, or judge in any criminal cause, he that is cast or condemned, if he hath goods, bears the charges, if he hath none, then the *Commune* bears the charges; so that every *Commune* is a common-wealth by itself, and its government purely democratical. Every two years they have two diets or general councils: the first diet (when the officers which they send to their several *Præfecturæ* are elected) is at *Michaelmas*, the second (when they take an account of their officers) is on *St. John Baptist's* day. To these diets each *Commune* sends its delegates, *Messi* they call them, or commissioners, some one and some two. These delegates must act according to the instructions given them by their several communities. Each league hath its head or chief. The burgomaster of *Coira* is always head of the league *della casa di Dio*. In the *Lega Grisa* there are four communities that by ancient custom have the head (who is here called *Landtreichter*) by turns. In the *Dieci Dritture* six communities have the choice of the chief, who is called *Landamman*. Those six *Communes* send each its delegates to *Tavas*, and the delegates by the major vote chuse the new *Landamman*. These sometimes with some assistants meet as a lesser council, but have no absolute or decisive sentence. There lies an appeal from the general diet to the communities, and what the major part of those concludes or agrees upon is valid. The *Grisons* pay no sort of datii, gabels, or taxes. In *Italy* the county of *Chiavenna* and the *Valtelline* are subject to the *Grisons*. To the county of *Chiavenna* they sent formerly two *podesta's* or bailiffs, one to *Plurs*, which town was miserably destroyed by the falling of a mountain upon it, and one to *Chiavenna*, who is called *Commisario*.

Near *Plurs* are made pots and vessels of stone turned after the manner of wood, which will endure the fire. The *Valtelline* according to *Simler* is divided into six *Præfecturæ*, whither the *Grisons* send *Podesta's* or governors. Those are *Bormio*, which some make a county by it self, *Tirano*, *Tellio*, *Sondrio*, *Morbegno*, and *Travona*. They named to us two more, viz. *Ponte* and

and *Chiur*. These *Podesta's* are changed every two years, the principal or head of them is the præfect of *Sondrio*, who is not called *Podesta*, but *Governatore* as we were told, as *Simler* saith *Capitano*. In the chusing of præfects the order both of the leagues and of the communities is observed. So that for example, if the *Lega Grisa* chuses the governor of *Sondrio* for this two years, the *Lega della casa di Dio* shall have the choice of him the next two, and the *Dieci Dritture* the following. The like order is observed in the several communities of each league. The people of *Valtelline*, the county of *Bormio*, and the county of *Chiavenna* pay no taxes or gabels more than for the maintenance of their governors or *Podesta's*.

We left *Ponte*, and passed over another high mountain called *Mar. 24.* in a very bad season, for that it snowed exceeding fast all the while we were abroad, which in many places so filled up the track, that we could see no way at all, only we could presently find when we were out, for then our horses were almost up to the belly in snow: besides a brisk gale of most bitter cutting wind blew just in our faces, which did so affect my eyes, that I could not open them without great pain for three days, nor easily endure to look upon snow for a great while after. The reason why my eyes were more afflicted than others, I conceive was, because I was not careful to wipe the snow off my face, but suffered it to freeze to the hair of my eyebrows and eyelids: the cold whereof, being contiguous to them, stupified, and would in time have quite mortified my eyes. And here by the way we may take notice, that the people living in this mountainous cold country look more swarthy and dusky, at least their faces and parts exposed to the air, and have not so good complexions as those that live below in a milder and more temperate region. It is an observation of *Bodin* in his *Method of History*, that the inhabitants of the temperate zone, as you go further and further from the tropic, are still whiter and whiter, till you come to a certain degree of latitude, and then they grow dusky and dark-colour'd again; witness the *Greenlanders*, *Laplanders*, &c. extremity of cold parching

and tanning the skin as well as excess of heat. And we found this true by our own experience; for our faces were so hack'd and burn'd (if I may take leave so to use that word) by the cold in our passage over these mountains that for some time after we look'd like so many gypsies. This night we lodg'd in a *terra* called *Bergun*.

25.
Coira or
Chur.

We went to *Coira*, the capital city of the *Grisons*, a pretty little town standing on a small river that falls into the *Rhine*, about half a mile below, environed almost with mountains, save only on that side the river *Rhine* runs; where there is a pleasant valley, having very good meadow and pasture grounds. The inhabitants of *Coira* are all *Protestants*, excepting the bishop (who coins money that is current here) and twenty four canons. The bishop hath nothing at all to do in the government of the town. The form of government is much like that of *Zurich* and *Basil*, viz. the citizens are divided into five tribes or companies, each of which chuses fourteen senators, which make up the great council of seventy. These are called *Ratsherren*, and are chosen by the people anew every year on St. *Martin's* day; anew I say, for the same are usually chosen again so long as they live. Out of this great council are chosen yearly of each tribe five into the lesser council, to which are added the five masters of the companies for the last year, who make up the number of thirty. Half these are called senators, and govern the commonwealth. The chief officers who preside in the senate are the two burgomasters, who rule alternately, one one year, the other the next. The council of thirty with the regent burgomaster, who is called *Statthoght*, judge in criminal causes. Besides there is a bench of judges made up of the five masters of the companies, and ten out of the council of thirty, wherein the prætor of the city called *Stattribchter* presides, which determines civil controversies and actions of debt. But from them there lies an appeal to the council of thirty.

Plants
observed
about
Coira.

In the mountainous pastures about this town, we observed growing plentifully *Crocus vernus flore albo*, & *flo. cæruleo*, & *flo. ex albo & cæruleo variegato*; He-

Hepatica nobilis ubique; *Leucoium bulbosum* Tab. & *Ornithogalum flore luteo*. Besides Coira the Grisons have two little towns which they call cities, *Mayfield* and *Lylandts*. For their religion the Grisons are divided; some communities being *Romanists*, some *Protestants*; but most *Protestants*, of whom they told us there were in all the country about 17000 fighting men.

We travelled from *Coira* to *Walenstat*, situate be-Mar. 29. side a small lake, thence called *Walenstatter-Sea*: passing 1665. by the way through *Mayfield*, *Ragats*, and *Sargans*. *Walenstat*. Both *Sargans* and *Walenstat* are *Voghtia's* or *Præfecturæ* belonging to the seven cantons.

We ferried over the lake to *Wesen*, and from *Wesen* 30. rode to *Glaris*, one of the thirteen cantons of *Switzer-* *Glaris*. *land*. Here we saw the horns of the *Ibex* (which they call *Steinbuck*.) The *Stein-* They are somewhat like to goat's horns, *buck* or *Ibex*. but larger. They told us, that there were none of these beasts found hereabouts, but that in *Wallisland*, and in the archbishoprick of *Salzburg* in Germany, there were of them. But of the *Rupricapræ* or *Gimpfes*, and *Mures* *Chamois*. *Alpini majores*, called *Marmotto's*, they have good store. or *Gemps*. Of birds they have in plenty *Merulæ torquata*, which *Marmot-* they call *Ringer-Amzel*; *Merulæ aquaticæ*, which they to's. call *Wasser-amzel*; *Urogallus*, or cock of the wood, *Lagopus*, a milk white bird somewhat bigger than a *Partridge*, feathered down to the very toes and claws, of the *heath-cock* kind; but more of these in the Grisons country, where they brought them us to sell. The people of this canton of *Glaris*, as also *Appenzel*, are mixed, two third parts *Protestants*, and one third *Roman-Catholicks*. They both make use of the same church for their several services: first the priest comes and does mass, then the minister, and preaches.

The governments of the several cantons of *Switzerland* may be reduced to three forms or heads. The first is of those cantons which have no cities, whose chief officer is is called *Landamman*; and in these the supreme power is in all the people, by whose counsel all businesses of moment are decided. Of this sort are *Uri*, *Suits*, *Underwalden*, *Zug*, *Glaris*, and *Appenzel*. The second, of those which have cities that were either built by, or sometime subject to Princes, whose chief officer is

called *Scultetus* or scout: this form is most aristocratical of all others; and of this sort are *Bern*, *Lucern*, *Friburg*, and *Solothurn*. The third, of those which have cities divided into several tribes or companies, by whose suffrages the magistrates are yearly chosen; of this order are *Zurich*, *Basil*, and *Schaffhausse*.

G L A R I S

Is divided (according to *Simler*) into fifteen parts, but as we were told there into twelve parishes, of which some have five counsellors, some six; some more, some less, according to their bigness. These make up the senate or council, which consists of sixty, whereof two parts are of the *Reformed* religion, and one of the *Romish*, besides the *Landamman* and other chief officers, who have the privilege of sitting in council when their term is expired. The chief and supreme power is in the whole people. Upon the last *Sunday* in *April* yearly there is a general convention of all the males above sixteen years of age, together with the magistrates at a place called *Schuandan*. This general meeting or convention is called *Landtskmein*: and by these by majority of suffrages the magistrates and officers are chosen; and first the *Landamman*, who continues in office sometimes two, sometimes three years. Into this office they may choose out of all the people whom they please without any regard of place. 2. The *Statthalter*, who is the *Landamman's* lieutenant. These offices in this canton are thus divided between the *Protestants* and *Papists*. Three years the *Landamman* is a *Protestant*, and the *Statthalter* a *Papist*; then the two following the *Landamman* is a *Papist*, and the *Statthalter* a *Protestant*. 3. The *Seckelmaster* or treasurer. 4. *Pannerbeer* or standard-bearer. 5. *Landtshauptman* or chief captain, and under him in time of war a lieutenant. 6. *Landtsfondricht* or ensign. These three last continue for life. 7. Three *Landtschrieven*, i. e. secretaries or chancellors, who are present in council, but have no suffrages. 8. *Landtweible* or apparitor; he gathers the votes in the general convention, summons the council by proclamation in the church, &c. The *Landtsfemein* chooses also the *Landtvogts* or prefects, and either confirms or abrogates

gates publick edicts and constitutions. The sixty senators usually continue in office during life *modo bene se gesserint*, yet are they yearly chosen a-new or confirmed at the general convention, not by the whole convention, but each one by that part or parish to which he belongs, and by which he was chosen; who also when any one dies chuse another into his place. The *Landamman* when his office is expired is called old *Landamman*, and may still sit in council, which is a favour allowed him in regard of his former dignity. The aforementioned officers do also sit in council. The *Landamman* puts men in prison by his authority, propounds business to the council, appoints the days of the council's meeting, and to that end appoints the officer to give them notice in the church. In this canton, to avoid the ambition and inordinate expences of candidates for offices, who were wont to court and feast the people, they have lately introduced lottery in the choice of officers and governors. All the candidates are first put to the vote, and those eight (if there be so many for any one place) who have most suffrages are set in the middle. Then the *Landtschrieb* or secretary takes eight balls, one of which is gilt, and wraps them up in single papers, and puts them into a hat which he holds under his arm, whilst a little child puts in his hand and takes out the balls one by one, and gives them to the eight. He who happens to have the gilt ball is the officer. Besides these councils there are also two consistories of judges; one consisting of nine, chosen by the *Landtskmein* out of the council or *Ratsheeren*, to whom the *Landamman* is added president, who determine all causes of injuries, and all business of inheritances, and where money is gained with hazard of life; the other consisting of five who determine actions of debt. These consistories (saith *Simler*) sit only in *May* and *September*. Private quarrels by consent of the parties are usually referred to a counsellor of the parish. To the general diet at *Baden* the *Reformed* send the *Landamman* when he is a *Protestant*, and the *Roman Catholics* the *Statthalter*, and so *vice versa*.

The territory of *Glaris* is about eight hours long, that is, allowing three *English* miles to an hour, twenty four miles:

miles: the number of freemen of both religions about 2500. This canton hath one *vogtia* or bailiwick proper to itself, that is *Werdenberg*, to which every three years they send a new *landtvogt* or prefect, who is a *Protestant*.

In the cantons of *Basil*, *Zurich*, *Bern*, *Lucern*, *Schaffhausse*, *Triburg* and *Soloturn*, the citizens only are freemen, and the territory or country round about with all the towns therein are subjects, and divided into several bailiwicks or *præfecturæ* (*Vogties* they call them) to every of which the cities send a *bailiff* or *landtvogt*, who is governor there, whom they change in some cantons every second, in some every third, in some every sixth year. In the other cantons where there are no cities, all the countrymen inhabiting the canton, properly so called, are freemen; I say the canton properly so called; for these also have their subjects, whom they govern likewise by their *præfects* or *landtvogts*. Besides the proper there are also common *præfectures* or *vogties*, some to two, some to three, some to seven, some to twelve, and some to all the cantons: to which the cantons concerned by course send their *landtvogts*. To the twelve cantons (*Appenzel* is the excluded) belong the four *Italian præfecturæ*, which they obtained by the donation of *Maximilian Sforze* Duke of *Milan*, *An. 1513. viz. Lugano, Lagarno, Mendriz, and Val Madia*. To the seven cantons, that is *Zurich*, *Lucern*, *Suitz*, *Uri*, *Underwald*, *Glaris* and *Zug*, belong *Baden*, *Liberæ Provinciæ*, and *Sargans*: to these seven and *Bern* belongs *Turgow*; to these seven and *Appenzel* belongs *Rhineck* or *Rheinthal*. To the three cantons, *i. e. Uri*, *Suitz*, and *Underwald* belongs *Bellinzona* in *Italy*, whose territory is divided into three bailiwicks, to which those three cantons send *landtvogts* by course, *viz. Bellinzona, Val Palensa, and Riviera*. To the two cantons of *Suitz* and *Glaris* belong *Uznach, Wesent, or Castra Rætica*.

At *Glaris* they told us, that in their own country those of the canton of *Suitz* were good soldiers, but living most upon milk and white meats, they could not last and endure abroad. That those of *Uri*, *Appenzel*, and the lower part of *Glaris* made the best soldiers of all.

April 1.

We travelled from *Glaris* through *Nafels* a little village, and several other villages near the lake of *Rappersville*

ville or the Zurich-sea, especially *Lachen*, where they usually take boat for *Zurich*, and after an hour's riding by the lake's side, and in sight of *Rappersville* and the long bridge cross the lake, we climb'd up a very high mountain on our left hand, to the top of which when we were ascended we rode through a country all covered with snow, which in the summer time seems to be a very pleasant place. Here we found *Eynsidle*, where is a famous monastery of *Benedictine* friars, in whose church is an image of our Lady, which works great miracles, *si credere fas sit*. This is a place of great devotion, visited by strangers and pilgrims after the manner of *Loretto*. And as there is the *holy house*, so here is a *chapel* divinely consecrated, set in the body of the church, and inclosed in a case of marble, given by an archbishop of *Saltzburg*. Near the door of this church is an alley of shops of beads and medals, as at *Loretto*; and here as there an incredible number of beggars continually waiting. The canton of *Swytz* is protector of this abbey. If any one desire to know more of this place he may consult the history of it, intitled (as I remember) *Sanctæ Virginis Eynsiddlenfis*.

We rode again over the snow for about three hours, and then descending by degrees we passed through three villages, and at last arrived at *Swyts*, a fair village (for it's counted no other, though it be comparable to the best of our market towns) having a large *piazza* handsomely paved.

The government of this canton is much what the same with that of *Glaris*. The whole canton is divided into six parts or quarters. Each division hath ten counsellors; so that the council or senate consists of sixty, which they call *Ratsbeeren*. When a senator dies, that quarter to which he belonged chuses another by the major vote of all the people. Every quarter hath its head, who is called *Siebener*: because they are seven in all, the *Landamman* making one of the number; which make a lesser council to manage and take care of the publick revenue. The senators are obliged in important causes to take each his man to be his assistant, and in the most weighty of all (as concerning peace or war) each two men; so that then the council is tripled. The last Sunday of April (as at *Glaris*) is the convention of the whole canton called the

the *landtskmein*, when all the males above sixteen years of age meet and elect by major vote the *landamman* and other officers and *landvogts*. To this meeting all the people that can conveniently are obliged to come; and every one to swear fidelity to their country, to maintain their liberties, &c. The officers are the same as at *Glaris*. This canton and every one of the rest send two *Messi* to the general diet at *Baden*, of which the *landamman* is usually one. This canton hath also the like two little councils or consistories as *Glaris*.

3.
Altorf.

We rode about three miles to a place called *Brunen*, beside the lake of *Lucern*, and there embark'd for *Altorf*, spending in our passage upon the water about three hours, and then we had but a mile to the town. From *Schwytz* to *Altorf* there is no travelling by land (as they told us) unless we would go some scores of miles about. *Altorf* hath no piazza, yet is it a larger town than *Schwytz*, and hath a pretty church and a monastery of *Capucines*. Here we heard at large related to us the story of *William Tell*, and the *landtvogt*, which he that is desirous to know may consult *Simler*. On the top of a pillar over one of their fountains in the street is set the statue of this *Tell*, with his cross-bow on his shoulder, and leading his son by the hand. At some distance stands a tower on which are painted the several passages of the story.

The government is almost all the same with that of *Schwytz*. The number of senators, and manner of their election the same. The officers and magistrates the same, only they mention'd a *Suk-beer*, who hath the charge of the ammunition, whom they told us not of in other cantons, and six *fiersprachts*, i. e. proctors or counsellors, but not of the council. The senators, being to judge in criminal causes, take to them another man, so that then the council is doubled. They have also a lesser council of fifteen, called the *Landtram*, which decides civil causes. These are taken out of the great council, and go round in a *rota*. They meet the first *Monday* every month. A third council also they have called the *Poderade*, which sits weekly about actions of debt where the sum exceeds not sixty livers. The senators (as they told us) have no salary or allowance at all. When one of the council is chosen *landtvogt* he is put out of the council. *Uri* is the first canton that set itself at liberty.

We returned to the lake of *Lucern*, and taking boat, ^{April 4.} we went by water within one hour of *Stantz*, the principal village of *Underwald*, where we lodged. As we sailed upon this lake, we happen'd to see a great fall of snow from the tops of some mountains hanging over the lake, which made a rattling and report not unlike thunder, as *Monfieur des Cartes* in his meteors notes. At *Stantz* they have a very fair church, and two convents, one of *Capucine* friars, and one of nuns. Here and at *Altorf*, *Swytz*, and *Lucern*, &c. we observ'd in the church-yards crosses set upon the graves, some of wood, some of iron, and on some of them hanging a little copper kettle with holy water in it. Some women we saw coming with a bunch of herbs in their hands, which they dipp'd in the kettle, and sprinkled the water therewith upon the graves. These, I suppose, were widows or mothers who sprinkled the water upon the graves of their dead husbands or children.

This canton is divided into two parts, *Oberwald*, or the upper, whose capital village is *Stanner*, and the lower, or *Underwald*, the head whereof is *Stantz*. In the lower are sixty senators, chosen by eleven *Communes*; some whereof have more, and some fewer, according to their bigness. The officers are the same, and chosen in like manner as in *Schwytz* and *Uri*; only the *Landamman* and *Statthalter* continue in office but one year.

The *Landtweibel* or apparitor, and seven judges, chosen one out of a *Commune*, judge in civil causes. From these there is an appeal to another tribunal of eleven, consisting of the *Landamman*, and one elected out of each *Commune*, save that the *Landamman* is of. These eleven are chosen out of the council, the seven indifferently. In capital causes the council of sixty judges, and besides any one of the country may be present, and give his suffrage, if he pleases, though ordinarily none do but the senators, who are all thereto by oath obliged. The senators and officers of this canton have all salaries. Here and in *Uri* all the males of all conditions that are fourteen years old and upward have their suffrages at the *Landtskmeind*. *Oberwald* hath likewise a council, *Landamman*, and other officers by themselves, indeed nothing common with *Underwald*.

derwald. They nominate *landvogts* and ambassadors by turns. They might be esteem'd two cantons, were it not for that they have but two delegates at the diet at *Baden*, as the other cantons have.

These three cantons, *Uri*, *Suwtz*, and *Underwald*, consist chiefly, not to say wholly, of pasture ground: no corn-fields or vineyards here. Their wine is imported from *Italy*, their corn from several parts. They boast that by this means their ground is not so subject to the casualties of weather, or injuries of bad seasons, as either plowed fields or vineyards, and yields to the owners a more certain profit. It's well if one reason, why they maintain all their ground pasture, be not because they are unwilling to take pains in husbandry. Wine is dear here. At *Altorf* and *Stantz* they have it from *Logarno*. At *Suwtz* they have both *Valtelline* and *Logarno*-wine. The people are very honest and good-natur'd, keep their houses neat and cleanly, and withal very polite and in good repair. The men are given much to drinking. The meat stands before them three or four hours, and they now and then eat a bit, but the main business is drinking.

April 5.
Lucern.

We travell'd to *Lucern*, crossing over a part of the lake. This is a very neat city, and pleasantly situate upon the lake: divided into parts by a river which runs out of the lake; over which there are three bridges, one for carts and horses, the other two handsome foot-bridges cover'd over with a roof or penthouse, one near a quarter of a mile long. Besides, there is a fourth bridge, which leads towards the church, cover'd like this last, and longer than it. The great church stands without the city wall; a very handsome, tall, and lightsome structure. Over the western door is the greatest organ that ever I saw: a man might very well creep into the hollow of the greater pipes of it.

The account of the government that was given us here was much different from *Simler's*. They told us that the great council consisted of 136, whereas he writes that it consists of no more than 100: but these may be reconcil'd; for that, I suppose, he excludes the lesser council, which they included.

They

They continue in office during life; and when one dies, the rest of the council choose another into his place out of the citizens whom they think fit. *Simler* saith, that the lesser council of the last half year choose the new senators. This council hath two presidents whom they call *Scutelti*, who preside *alternis annis*, and continue in office during life. *Simler* saith they are chosen yearly by the suffrages of both the councils. The manner of choosing officers and senators is this. Behind a curtain, according to the number of competitors, are placed two, three, or more boxes. Every senator hath given him a little medal or piece of money for that purpose; and so the senators go one by one behind the curtain, and put the medal into what box they please, and he that hath most of these pieces is understood to be chosen.

Out of the great council is chosen a lesser of the most ancient and wise, who also continue during life, and judge in civil causes, and take care of the ordinary concerns of the city; and for that purpose they sit daily. They are divided into two equal parts, eighteen for the summer, and eighteen for the winter. If one of the winter dies, those of the summer elect one into his place out of the hundred, and *vice versa*. The great council of 136 judge in criminal causes. Those of the lesser council have five *Batz* [about 10*d.* or 1*s.* *English*] and those of the great council two *Batz per diem*, for every day they sit in council. All the people of the territory of this city are subjects, and divided into nineteen or twenty *Præfecturæ*: the number of fighting men about 18000. The subjects in time of peace pay no more tribute than five *Batz*, or a hen the man *per annum*, to the *landtvogt*.

From *Lucern* we travelled to *Zug* called in *Latin* *Tugium*, about fifteen miles. This city is by one half less than *Lucern*; it stands by the side of a little lake. The government of this canton is popular like those of *Uri*, *Schwytz*, and *Unterwalden*. Besides the city there are three *Communes* which have an interest in the government, *viz.* *Eyry*, *Mensingen*, and *Baar*. They have a council of forty (as they told us there) but according to *Simler* of forty five; nine out of each commune and eighteen out

out of the city. The three *Communes* have the *Landamman* six years and the city three. So that when the *Landamman* is of a *Commune* he continues in office but two years, when of the city three years. When one of the council dies another is chosen into his place by major vote of all the males above eighteen years of age of the city, or that community to which he that died belonged. The magistrates are the same and elected in like manner as in *Uri* and *Swytz*, &c. All the *Præfecturae* (which are in number eight) belong to the city only. The city together with its subjects can arm 4000 soldiers; the three communities not 2000. Yet are they obliged by ancient convention to bear two third parts of the charge, in case there be any war. In criminal causes they have twelve judges taken out of the council, three of the city and three of each community. In civil the senators judge in their several communities. To the general *Diet* at *Baden* the city sends one, and the three communities another. The nomination of the common *Landtvogts* the city hath once, and the communities twice. When the *Landamman* is of the communities, he is obliged during his office to reside in the city.

The lake of *Zugh* hath great variety of fish, more than any other lake of *Switzerland*, if the people there may be believed. They named to us eels, carps, perches, trouts, salmons, which is very strange, there being no way for them to get thither but up the *Rhine*, and so they must have a course of above 500 miles; and besides there being at *Wassersfal* a huge cataraet of the whole river, which one would think it were impossible to pass. *Esch* called by the *Italians* *Temelo*, and in *English* *Grayling*, *Trisea* or *Trasine*, in *English* *Eelpout*, *pikes* (of which we saw one taken that weighed thirty pound) *weiss-fish* or *Alberlin*, called at *Geneva* *Farra*. This fish is taken in the lake of *Bala* in *Merionethshire* in *Wales*, and there called *Guiniad* from the whiteness of it: and in *Hulls-water* near *Pereth* in *Cumberland* and there called *Schelley*: *Hassler*, which I take to be the *Charre* of *Winandermere* in *Westmoreland*, and the *Torgoch* of *North-wales*: *Balla*; *Nase*, called by naturalists *Nasus*, *breams*, *crevises*, and a great many sorts more to the number

number of at least fifty. In many of the shady lanes we passed through about *Stantz*, *Zug*, and elsewhere we observed growing plentifully *Anblatum Cordi* or *Dentaria aphyllus*.

We travelled from *Zug* to *Zurich*, which is five good hours riding. But of that city we have already written. April 7. Zurich.

From *Zurich* we rode to *Mellingen* a free town not far from *Baden*, four good leagues; and then through a little walled town belonging to the *Bernese* called *Lensburg*, and lodged at *Aarau* a considerable town upon the river *Aar*, subject also to the *Bernese*, four short leagues. 13. Melling n. Lensburg: Arauw.

We travelled a freight rode passing no considerable town till we arrived at *Soloturn*, nine leagues distant from *Aarau*. This, though it be the head of a canton, is no large town, nor very considerable for its strength. 14. Soloturn.

We diverted out of the common rode to *Geneva* to see *Bern*, six hours distant from *Soloturn*. This is a handsome city, built all of stone, though the houses be not tall. It hath one fair long street with narrow portico's or cloisters on each side. It lies stretched out in length upon a hill which I may call a *Peninsula*, it is so almost begirt about with the river. On that side where it is not compassed with the river it is strongly fortified with good bastions and outworks. The founder of this city as also of *Friburg* in *Switzerland*, and *Friburg* in *Brisgoia*, was *Berchtoldus* duke of *Zerin*; as appears by the inscription upon their monies. To him they have erected a monument in the great church. This church is one of the handsomest stone-fabricks in all *Switzerland*,

The territory of this city is more than one third part of the country of the *Switzes*, and is divided into sixty *Præfecturæ* or bailiages, besides four which are common to them with *Friburg*. For this reason there must needs be many rich men in the city, though they have but little trade. The *Landvogts* or bailiffs continue in office six years, during which time they enrich themselves well; yet do not their subjects complain, but acknowledge themselves well used by their governors. Here they keep five or six bears in a pit;

These bears I observed to climb the fir-trees growing in the pit, and delighting to sit on the tops of them like birds on a perch. The arms of the town is also a bear, which they took I suppose alluding to their name *Bern*: and they first coined the money called *Batzes* from the figure of a bear stamped upon it: which afterward all the cantons imitated, calling it also by the same name.

From *Bern* we rode to *Friburg* a handsome town and the head of a canton, built upon a hill almost begirt with a river after the manner of *Bern*, and by the same founder, on all sides environed with hills, save where it is contiguous to the land. Their territory is surrounded with and inclosed in the territory of *Bern*.

18. From *Friburg* we travelled through *Maulton* to *Lau-Laufanna*. *sanna*, a great town and an university, and from *Lau-Morges*. *sanna*, April 19. through *Morges* a large town, *Rolle* and *Nion* considerable towns by the lake of *Geneva's* side, and *Versoy* a little town on the lake near *Geneva*, belonging to the *French*, and came to our lodging at *Geneva*, where we rested and sojourned near three months.

The governments of *Soloturn*, *Bern*, and *Friburg* are much like that of *Lucern*. In *Soloturn* the number of the lesser council is thirty five, and of the greater one hundred and fifteen. When one of the thirty five dies, the thirty four remaining chuse one into his place out of the one hundred and fifteen. When one of the one hundred and fifteen dies, or is advanced, the rest chuse one into his place out of the number of the citizens. In *Bern* the greater council consists of two hundred, and the lesser (as we were told there) of forty two, though *Simler* makes them but twenty six. These councils are chosen by twenty electors, and the *Scultheffs*, viz. the four *Signiferi* of the city, and sixteen whom they pick out of the whole body of the citizens, and join with themselves. In *Friburg* the lesser council is of twenty four, and the greater of two hundred. When one of the lesser council dies they chuse one into his place out of the greater: and when one of the greater dies, or is removed, the lesser (as I understood them) chuse one into his place out of the number of the citizens. All these cities

cities have two *Sculteti* or consuls who rule *alternis annis*. He that desires a more full and particular account of the government of these cities may consult *Simler de Repub. Helvetiorum*. Each of the cantons have some saint or other to be their patron and protector, whose image the *Popish* cantons set on the reverse of their monies, v. g. *St. Oswald* a king of *England*, protector of *Zug*. In their church they have his relicks, and have set up his image on horseback. The *Protestant* cantons are *Zurich*, *Bern*, *Basil*, *Schafhausse*, part of *Glaris*, and part of *Appenzel*. That which most frequently breeds differences and quarrels among the *Switzers* is the business of the common *vogties* or bailiwicks. For most of these [I mean the *Dutch* ones] being of the *Reformed* religion are oppressed and and injured by the *Popish Landtvogts*, the *Protestant* cantons not knowing how either to help and relieve them or retaliate. For, the *Popish* cantons being more in number than the *Protestants*, they send *Landtvogts* to these places twice to the *Protestants* once. This one of the ministers of *Zurich* told me was *fundi sui calamitas*, and occasioned the two late breaches among them.

The *Switzers* on each side are very stiff in their religion; the *Papist* not permitting or tolerating one *Protestant*, nor the *Protestants* one *Papist* in their proper territories. Tho' the cantons adhering to the church of *Rome* are more in number, yet the *Reformed* are much the greater, besides that their land is better, very like ours in *England*. The *Romanists* are accounted the better soldiers, and good reason they have, being more exercised in war, serving the *Spanish* and *French* Kings, as being of the same religion. Besides, the *Zurichers*, who antiently had the reputation for valour, are now much given to merchandise and to accumulate riches, and so taken off from martial studies and exercises. The *Bernes* though they have far the greatest and best territory of all (so that it's said they can arm as many men as the dutchy of *Milan*; send into the field 100000 soldiers and yet leave enough at home to till the land) yet have they no reputation for soldiers; they lost their credit quite in the late skirmish with the *Lucer*, who account them rather *Savoyards* than *Switzers*. All the cantons of *Switzerland* co in money

except *Appenzel*, *Underwald*, and *Glaris*, of which *Glaris* formerly hath coined though now it doth not. All the *Switzers* in general are very honest people, kind and civil to strangers. One may travel their country securely with a bag of gold in his hand. When we came to our inns they would be troubled, if we distrusted them so far as to take our portmanteaus into our lodging-chambers and not leave them in the common dining rooms. They keep their houses very clean and polite like our housewives in *England*. For plants, going from *Zurich* to *Mellingen* we observed common *Gooseberry* in the hedges and by the way-sides very plentifully, and in some places *Barberries*. *Sigillum Solomonis* and *Herba Paris* are the most common plants that grow in this country in the woods and hedges every where: *Annoymus flore Coluteæ* on the mountains near *Zurich*. From *Aarau* to *Soloturn* *Helleboraster maximus* on the hills sides, as also *Christophoriana*, not to mention *Fumaria Bulbosa* every where growing in the shady lanes.

Geneva.

Geneva is pleasantly seated at the lower end of the *Lacus Lemanus*, now called *Genffer-zee* or the lake of *Geneva*, upon a hill side respecting the lake; so that from the lake you have a fair prospect of the whole town. It is divided by the river *Rhodanus* or *Rhofne* into two parts, which are joined together by two wooden bridges, one of which hath on each side a row of houses after the manner of *London-bridge*, only they are low. The two principal and indeed only considerable streets in the town are the low street [*Rue bas*] which runs along by the river and lake's side; and the high street or great street [*Rue Grand*] which runs up the hill. The city is indifferently strong, and they have lately been at great expences to fortifie it *à la moderna* with ramparts and bastions of earth. Though it be small yet is it very populous, being supposed to contain 30000 souls. *St. Peter's* church, formerly the cathedral, is handsome and well built, and in it is a stately monument for the duke of *Rohan*. The citizens are very busy and industrious, subsisting chiefly by trading: the whole territory of this republick being not so great as some one nobleman's estate in *England* for extent of land. All provisions of victuals are very plentiful

ful and cheap at *Geneva*, especially milk-meats, the neighbouring mountains feeding abundance of cattle.

The tops of *Jura*, *Saleve*, and other high mountains of *Savoy*, *Daulphiny*, and the *Alps*, where they are bare of wood, put forth very good grass so soon as the snow is melted off them, which usually is about or before the middle of *May*. And then the country people drive up their cattle to pasture, and feed them there for three months time. Upon these hill tops they have here and there low sheds or dairy houses, which serve the men to live in, and to make their butter and cheese in, so long as they keep their beasts above. The men I say, for they only ascend up thither and do all the dairy work, leaving their wives to keep house below; it being too toilsome for them to clamber up such high and steep hills. By reason of these cotes it is very convenient simpling upon the mountains, for, if a man be hungry or thirsty, he may soon find relief at one of them. We always found the people very kind and willing to give us such as they had, viz. brown bread, milk, whey, butter, curds, &c. for which we could scarce fasten any money upon them.

For the temper of the air, in respect of heat and cold, *Geneva* I think is very like *England*, there being no great excess of either extreme. The city is well governed, vice discountenanced, and the people either really better or at least more restrained than in other places: though they do take a liberty to shoot and use other sports and exercises upon the Lord's day, yet most of their ministers disallow it, and preach against it.

Our long stay here at *Geneva*, and that in the pro-Plants per season for simpling, gave us leisure to search for, observed and advantage of finding many species of plants in the about neighbouring fields and mountains, of which I shall *Geneva*, here present the reader with a catalogue: such as are native of *England* are in the *Roman* letter.

In Colle la Bastie dicto & Sylvis clivosis ad Rhodani ripas.

Colutea scorpioides: *Melissophyllum Fuchsi* flore albo atque etiam vario: *Lilium flore nutante ferrugineo majus* J. B. *Monophyllum* Ger. *Orob. Pannonicus* 1 Clus. *Hepaticum trifolium* Lob. *Frangula*; *Chamædrys falsa maxima*, &c. J. B. *Bellis sylvatica* J. B. *Trifolium purpureum majus folio* & *spica longiore* J. B. *Orob. sylvaticus vicia foliis* C. B. *Tithymalus cyparissias* J. B. *Tithymalus non acris flore rubro* J. B. *Horminum luteum* sive *Colus Jovis*; *Aquilegia vulgaris*.

In monte Saleve dicta unâ circiter leucâ à Geneva distante.

Cotoneaster Gesneri J. B. *Diospyros* J. B. *Bellis cærulea Monspeliaca* Ger. *Scabiosa* 10 sive *repens* Clus. *Asine muscosa* quibusdam J. B. Ad rivulos prope Saleve. *Ageratum purpureum Dalechampii* J. B. ad radices montis. *Sanicula Alpina guttata*, in summitate prope fontes. *Pes cati* flo. albo & suaverubente *ibid.* & *copiosissime*. *Gentiana major* Ger. In pascuis prope summitatem montis abunde. *Gentianula quæ Hippion* J. B. *ibid.* *Cacalia* quibusdam J. B. in sylvis suprema montis parte. *Polygonatum angustifolium*, *ibid.* *Polygonatum* floribus ex singularibus pediculis J. B. In rupibus & saxosis ad latera montis. *Draba alba siliquosa repens*, juxta fontes prope montis summitatem. *Hesperis sylvestris latifolia flore albo parvo* Park. *Ribes Alpinus dulcis* J. B. In sylvis summo montis cacumine. *Anagyris* sive *Laburnum*, In sylvis ad latera montis. *Ferrum equinum Gallicum siliquis* in summitate C. B. *Perichyllum rectum fructu rubro* Ger. *Doronicum vulgare* J. B. *Dentaria hep- taphyllos* C. B. In sylvis ad latera montis. *Barba capri*, J. B. *ibid.* *Lilium convallium*, *ibid.* *Christophorina*, *ibid.* *Lilium floribus reflexis montanum* C. B. *Aria Theophrasti*; *Melissophyllum Fuchsi*; *Polygonatum vulgare*; *Polemonium petraeum Gesn.* *Colutea scorpioides*; *Thlaspi oleraceum* Tab. *Fraxinus bubula*; *Alchimilla vulgaris*, in pascuis in suprema montis parte abunde. *Pyrola vulgaris*; *Pyrola fol. mucronato serrato* C. B. utraque in sylvis. *Filix ramosa minor* J. B. *Libanotis Theophrasti minor* Park. In saxosis ad latera montis. *Siler montanum Officinarum* J. B. *Carum*: *Lactuca sylvatica purpurea* J. B. *Cyclaminus folio anguloso* J. B. *Filix Saxatilis non ramosa minima*; *caryophyllus gramineo folio mini-*
my

mus; *Aconitum lycoctonum luteum* C. B. *Vicia maxima dumetorum* J. B. in sylvis in ascensu montis. *Sedum Alpinum hirsutum luteum* C. B. E saxorum rimis emergit. *Peucedani* facie pusilla planta *Lob.* E. rupium fissuris. *Sedum serratum* J. B. *Uva ursi*; *Colus Jovis*; *Gramini Luzulæ affine flore albo* J. B. In sylvosis & dumetis prope imam montis partem. *Thlaspi Alpinum minus capitulo rotundo* C. B. In rupibus humidioribus. *Rubia cærulea elatior* J. B. inter segetes. *Phalangium pulchrius non ramosum* J. B. *Androsæmum Campocla- rense* Col. *Helianthemum Alpinum folio Pilosellæ minoris Fuchsi* J. B. *Helleborine ex albido sublutea* J. B. In sylvosis ad radices montis. *Astragalus Monspeliano candi- dior* & *Onobrychis quorundam* J. B. In saxosis. *Hellebo- rine flore albo*, In sylvis suprema montis parte. *Astran- tia nigra*, In pratis montosis. *Cicutaria latifolia hir- suta* J. B. *ibid.* *Pentaphylloides erectum* J. B. Prope ar- cem antiquam jam dirutam. *Chamænerium vulgare: Pilosellæ majoris sive Pulmonariæ luteæ laciniatæ species minor* J. B. *Hieracium parvum hirtum caule aphyllis cris- pum ubi siccatum* J. B. ad radices montis. *Orchis stra- teumatica minor* J. B. *Pseudo-asphodelus quibusdam.* J. B. In paludosis ad radices montis. *Orchis parva autum- nalis lutea* J. B. *ibidem.* *Diospyros* J. B. In syl- vosis ad latera montis. *Thymelæa quædam incana.* Ad pedalem & sesquipedalem altitudinem assurgit, & in plures ramos dividitur hic frutex. Lignum ejus supra modum fragile, Cortex cinereus; Folia Mezerei Germanica sed minora, acuminata, utrinque hirsuta, glauca. Flores in summitatibus ramulorum 4 aut 5, aut etiam plures simul conferti, pediculis nullis, nullo calice, e tubo longi- usculo in 4 foliola alba acuminata expanduntur, Stami- nula crocea intus continentes. Floribus succedunt baccæ longiusculæ quæ nondum maturuerant. Floret initio Maii; in sylvosis ad latera montis. *Dentaria Pentaphyl- les*; *Damasonium purpureum dilutum sive Helleborine* 4 Clus. J. B. In sylvosis ad latera montis. *Calceolus Mariæ* *ibid.* *Carduus Cirsium dictus folio laciniato ni- grius* J. B. *Pentaphyllum rectum* J. B. e rupium fissuris. *Campanula repens flore minore cæruleo* J. B. *Digitalis flore minore subluteo, angustiore folio* J. B. *Alsine maxima* Hist. Lugd. *Valeriana Alpina* J. B. Hanc Patavini Va- leri-

lerianam Trachelii folio denominant, apta sane appellatione: Sunt enim ei folia Trachelii majoris. Radix valde aromatica est & odorata. *Valeriana Alpina altera foliis integris, inodora: Radices longæ, repentes, fibris donatæ subinde germina protrudunt. Folia valerianæ minoris sylv. ex rotundo oblonga pediculis longis insident, non laciniata, ne illa quidem quæ in caule consistunt, ad margines obiter nonnunquam dentata, violæ foliis quodammodo similia. Radix nec saporem nec odorem (quem quidem ego sentire potui) aromaticum habuit. Caulis pedalis, rotundus, striatus, concavus, dulplici plerunque foliorum pari, quæ sine pediculis illos amplectuntur, præditi. Flores albi, Valerianæ sylvestris simillimi, uti sunt & semina. Scabiosa maxima dumetorum folio non laciniato J. B. Herba Doria, propè Carthusianorum cœnobium. Ranunculus magnus valde hirsutus flore luteo J. B. ibid. Sedum an potiùs Draba minima siliquosa flore albo. Radice nititur simplici, fibrosâ, albâ: Folia juxta terram plura Senecionis aut Bellidis majoris sed minora & pro magnitudine breviora, per oras rarioribus incisuris dentata, extremitatibus subrotundis, atrovirentia, rarioribus pilis iis tamen rigidiusculis aspera. E medio foliorum emergunt caules rotundi, rubentes, rarioribus pilis hirsuti, foliis nudi præterquam ad florum pediculos. Flores in summitatibus caulium singulorum 5 vel etiam 6 & nonnunquam plures, albi, quadrifolii, e calice longiusculo, herbaceo, quadrifolio exeunt. In summitate montis sub initium Maii florere incipit.*

In monte Jura circa vertices Thuiri & la Dolaz rariores.

Helleborus albus in pascuis montosis copiosissimè. Tussilago Alpina minor folio rotundo J. B. in summis verticibus. Soldanella Alpina quibusdam J. B. ibid. Scabiosa montana maxima Park. In vertice Thuiri Ranunculus albus simplici flore J. B. In sylvis propè summitates montis. Ranunculus montanus albus hirsutus J. B. ibid. Thalictrum majus folliculis angulosis, caule lævi. J. B. ibid. Oxalis maxima sylvatica J. B. Oxalis folio rotundiore repens J. B. ibid. Lonchitis altera cum folio denticulato, sive Lonchitis altera Matthioli J. B. In ipso montis vertice in rupibus. Sedum majus vulgare ibid. Sedum tridactylites Alpinum, ibid. Chamædrys Alpina flore Fragariæ albo J. B. Auricula

muris pulchro flore, folio tenuissimo J. B. Accedit hæc planta ad Saxifragam nostram palustrem Anglicam. *Antithora flore luteo Aconiti* J. B. In summis montis jugis. *Linaria purpurea parva* J. B. *Dentaria quinquefolia* J. B. in sylvis ad latera montis. *Coralloides altera sive septifolia* J. B. ibid. *Cacalia quibusdam* J. B. ibid. *Pentaphyllum sive potius Heptaphyllum argenteum flore muscoso* J. B. Carum; *Phyllon thelygonon Dalechampii*; *Sigillum Solomonis angustifolium*. *Echium Alpinum luteum* C. B. *Libanotis Theophrasti minor* Park. *Astrantia nigra*; *Sanicula Alpina guttata*; *Helianthemum Alpinum folio Pilosellæ minoris Fuchsi* J. B. *Crocus vernus latifolius flore purpureo minore* J. B. *Helianthemum tenuifolium glabrum luteo flore* J. B. ad radices montis. *Pescati*; *Ribes Alpinus dulcis* J. B. *Lactuca sylvatica purpurea* J. B. *Valeriana Alpina*; *Cyanus major*; *Polygonatum floribus ex singularibus pediculis* J. B. *Digitalis lutea magno flore* J. B. Ad radices montis. *Thora folio Cyclamini* J. B. i. e. *Phthora Valdensium*; in summitate montis copiose. *Diospyros* J. B. In sylvis ad latera montis. *Plantago angustifolia Alpina* J. B. *Nerium Alpinum quibusdam, aliis Ledum glabrum* J. B. *Chamæmespilus* J. B. *Acini pulchra species* J. B. *Veronica saxatilis* J. B. *Chamædryi vulgari falsæ aliquatenus affinis Alpina, an Clinopodium Alpinum Ponzæ?* J. B. *Gentiana Alpina magno flore* J. B. in altissimo vertice *Thuri*. *Bistorta minima* J. B. an *Bistorta Alpina media* C. B? *Orchis palmata flore viridi* C. B. In pascuis montosis. *Orcheis rotunda Dalechampii* J. B. *Lunaria Botrytis* J. B. *Ranunculus flore globoso, quibusdam Trollius flos* J. B. *Pilosella sive Pulmonaria lutea angustiore folio* J. B. *E rupium fissuris exoritur. Nasturtium Alpinum tenuissimè divisum* J. B. *Aster purpureus montanus* J. B. *Viola maritima lutea* J. B. *Sideritis Valerandi Dourez brevi spica* J. B. *Geranium phæo sive pullo flore Clusii* J. B. *Daucus Creticus semine hirsuto* J. B. *Apium montanum nigrum* J. B. Ad radices montis. Circa verticem *La Dolæ dictum*.

Sonchus cæruleus latifolius J. B. *Tussilago Alpina folio longo* J. B. *Rapunculi genus folio serrato rotundiore* J. B. *Orchis palmata minor odoratissima purpurea sive nigra* J. B. In pascuis montosis. *Pentaphyllum Alpinum splendens aureo flore* J. B. *Gnaphalium Alpinum pulchrum*, In summo montis cacumine. *Asarum*, In sylvis non longè ab Abbatia

OBSERVATIONS Topographical,

batia de *Beaumont*. *Helleborine* flore atro-rubente. *Chamae-iasme Alpina* J. B. in Append. in altissimo vertice *la Dolaz*. *Hieracium Alpinum* flo. singulari magno cauli cubitali insidente. *ibid*.

Iterum in monte Thuri.

Pilosella minore flore, hirsutior & elatior non repens J. B. *Astragalus quidam montanus vel Onobrychis aliis* J. B. *Caryophylli sylvestris quædam species, flore purpureo odorato, foliis glaucis. Caryophyllus flore tenuissime dissecto* C. B. *Solidago Saracenicæ; Siler montanum; Pulsatilla alba* J. B. *Lunaria major siliqua longiore* J. B. *Hieracium latifolium montanum Genevense folio Conyzae majoris Monspessulanæ* J. B. Ad latera montis *Caryophyllus montanus tenuifolius Lini flore*. Radix ei lignosa, vivax: Cauliculi ex eadem radice plurimi ut in caryophyllis, lignosi, cortice cinereo tecti, [vetustiores intelligo] geniculis crebris intercepti. Ad singula genicula ramulorum hornotinorum folia ex adverso bina Tunicae minimæ vel Spergulae purpureæ, angusta, graminea. Cauliculi in ramulos divisi, inferius fere glabri, superne hirsuti, in summitatibus suis flores gestant amplos in pediculis longis hirsutis, albos, pentapetalos, striatos, Lini floribus similes; foliis quippe compositos subrotundis, & minime bifidis cujusmodi solent esse *Alfines* & *Lychnidum*, non tamen caducos ut in Lino, stamina continentes plurima herbacea seu luteola. Vasculum seminale longiusculum, crassum. Floret circa finem Junii & Julii initio. *Pseudestachys Alpina* C. B. *Ranunculus tenuifolius montanus luteus* J. B. *Bellis Alpina major rigido folio* C. B. *Salix pumila latifolia folio utrinque glabro, superne autem splendente*. Ramos per terram spargit minimi digiti crassitudine, annosos cortice glauco, juniores virente præditos, in plurimos surculos divisos, adeo ut terram cooperiant. Folia in ramulis crebra alternatim posita, pediculis brevibus fulta, parva, ex rotunditate acuminata, utrinque glabra, superne saturo virore splendentia, nervosa, unciam plerumque rarius fescunciam longa. Julos profert creberrimos, breviusculos è pluribus vasculis feminalibus in acutum apicem ex latiori base paulatim fastigiatis compositos. In altissimis jugis montis *Juræ*. *Veronica Saxatilis parva caulibus nudis*. Eodem modo repit & in varios dividitur cæspites quo *Cotyledon*

tyledon Matthioli, aut Sedum serratum. *Folia* ei Veronicæ parva, subrotunda, hirsuta; ad margines serrata. *Caules* eodem modo exurgunt quo in Phyllo Dalechampii thelygono, duorum triumve digitorum altitudine, rotundi, foliis destituti. *Flores* in summo 5, 6 aut etiam plures Chamædryos spuria aut Veronicæ, cærulei, quadrifolii. *Vascula* feminalia magna Thlaspeos aut Veronicæ vulgaris repentis. *Sedum minimum montanum non acre flore purpurascens parva.* *Radix* ei alba, tenuis, nec ultra annum (ut mihi visum est) vivax, pluribus fibris capillata. *Caulis* nunc simplex, nunc plures, semipalmares, erecti, rotundi, rubentes, foliis vestiti creberrimis, circumcirca nullo ordine positis, crassis, teretibus fere, apicibus obtusis, rubentibus. *Flores* in summis caulibus velut in umbellas digesti, exigui, pentapetali, vix se pandentes. *Florum* petala acuta, purpurascencia, linea per medium saturatoris purpuræ decurrente. *Vascula* feminalia quinquepartita, stellata.

In pratis, pascuis, satis, collibus, dumetis, aggeribus, alveis, muris, viis publicis, & alibi circa urbem.

Thlaspi oleraceum Tab. *Campanula Persicifolia*, in dumetis. *Chamædrys foliis laciniatis*; *Mezereon Germanicum*; *Christophoriana*; *Eryngium campestre*; *Sigillum Solomonis*; *Lilium convallium*; *Chamæpitys*; *Uva ursi*; *Rhamnus secundus* Clus. In arenosis ad Rhodanum. *Aria Theophrasti*; *Berberis*; *Thlaspi minus* quibusdam, allis *Alysson minus* J. B. passim. *Rapunculus Spicatus* C. B. in dumetis. *Pulmonaria maculosa* Lob. ibid. *Sinapi Genevense sylvestre* J. B. In muris ad pontem *Arvæ* flu. *Pentaphyllum parvum hirsutum* J. B. *Saponaria minor* quibusdam J. B. *Tanacetum inodorum* Clus. *Typha minor* J. B. in saliceto non longè à ponte *Arvæ* flu. *Trifolium pratense album* à Fuchso depictum sive mas J. B. *Tithymalus cyparissias* J. B. In agris siccioribus ad aggeres ubique. *Tithymalus platyphyllos* Fuchsi J. B. *Psyllium majus erectum*, in arenosis propè fluvium *Arvæ*. *Lysinachia siliquosa speciosa angustifolia* J. B. In alveo flu. *Arvæ*. *Scrophularia Ruta canina dicta*, ibidem & copiose. *Chamædrys vulgaris*; *Abrotanum campestre*, *Phyteuma Manspeliensium*, J. B. *Percyemenum rectum fructu rubro & nigro*

nigro J. B. In sepibus & dumetis. *Betonica coronaria* sive *Caryophyllus sylvestris* vulgarissimus J. B. in pratis. *Gallitrichum sylvestre* vulgo, sive *sylvestris Sclaræa* flore purpureo cæruleove magno J. B. *Orchis galea* & alis fere cinereis J. B. *Orchis myodes*; *Orchis fuciflora* galea & alis herbidis; in aggeribus sylvestris utraque & copiose. *Asclepias* flore albo; *Tamarix Germanica*, sive minor fruticosa J. B. Ad *Arve* fluvium. *Polemonium petraeum* Gesneri; Ad *Rhodani* ripas, inque ipsis urbis muris. *Crista galli* utraq; mas & femina J. B. in pratis. *Lotus siliquosa lutea Monspeliensis* J. B. *Chamæmelum* vulgare amarum. J. B. inter segetes, *Chamæbalanus* leguminosa sive *Terræ glandes*; in vineis & seget. extra portam S. Gervasii. *Lathyrus* flore vario ex coccineo & albo, inter segetes: *Rosa rubello* flore simplici non spinosa J. B. in collibus. *Gramen cyperoides* exiguum seminibus bullatis; *Melampyrum* multis sive *Triticum vaccinum*. J. B. inter segetes. *Melampyrum cristatum* J. B. *Asphodelus bulbosus Dodonæi*, sine *Ornithogalum* spicatum flo. vi-
rente J. B. inter segetes. *Orchis magna* latis foliis, galea fusca vel nigricante J. B. Ad latus sylvestri cujusdam collis propè montem Saleve. *Thlaspi umbellatum arvense* amarum J. B. In arvis non procul à *Thuri* copiose. *Allium umbelliferum pratense* J. B. *Rapistrum monospermon*, in aggeribus fossarum. *Campanula rotundifolia* minima J. B. in glareosis ad fluv. *Arve*, *Rosa sylvestris rubella* parvo frutice J. B. in collibus & dumetis copiosissime. *Medica major erectior* floribus purpurascens J. B. seritur aliquibus in locis ad pabulum jumentorum. *Rubia erecta quadrifolia* J. B. *Melilotus quinta Tragi* J. B. i. e. *Securidaca* flo. vario siliquis articulatis: *Blattaria* flo. albo & luteo, ad vias. *Chamædrys spuria angustifolia* J. B. in dumetis. *Pilosella minor* folio angustiore, minus piloso, repens. J. B. *Hyacinthus maximus botryodes*, comâ cærulea J. B. inter segetes passim. *Thlaspi* minus juxta S. Gervasii, in muris. *Sedum parvum* folio circinnato, flore albo J. B. in muris. *Heliotropium majus*, ad ripas fl. *Arve*. *Stachys Fuchsi*, ad vias. *Cynoglossum minus* J. B. in ruderatis & ad vias. *Cardiaca*, ibid. *Lathyrus* siliquâ hirsutâ J. B. inter segetes circa Champe. *Atractylis*, juxta vias propè urbem. *Saxifragia Venetorum*, in collibus ad *Arvam* fl. *Anonis lutea* non spinosa, *Dalechampia Natrix* J. B.

J. B. juxta fl. *Arve*. *Armeria prolifera* Ger. Ad vias passim. *Orobis* sive *Ervum multis*, inter segetes non longe ab oppido Fay. *Lathyrus anguloso semine* J. B. Hujus duæ varietates circa Genevam seruntur, alia flore albo, alia flore dilute cæruleo & striato. *Conyza media Monspeliensis*, quibusdam *Asteris Attici* genus folio glabro rigido J. B. *Tragorchis minor flore fuliginoso* J. B. In pascuis quibusdam trans *Rhodanum*. *Sedum echinatum vel stellatum flore albo* J. B. in muscosis sepium aggeribus. *Allium sphærocephalum purpurascens*. Bulbus ei simplex albus velut parvæ cepæ. Folia fistulosa, glauca tria quatuorve. Caulis dodrantalis, in cacumine flores gestans in orbiculare ferè capitulum conglobatos, è membranaceo purpurascente involucro, striato, in duas carinas dehiscente erumpentes. Flosculi singulares brevibus pediculis nixi, sex foliolis constant longiusculis, acuminatis, pallide purpureis, saturatiore lineâ purpureâ per medium decurrente, stamina sex brevica cum apiculis purpureis occultantes. Floret initio Julii: in arenosis ad *Rhodanum* fluv. *Gramen cum panicula molli rubente* J. B. Besides these which we found out J. Baubine observed some few others, which we had not the hap to meet withal, viz. *Carduus pratensis Tragi*, in monte *Thuri*: *Eryngium Alpinum latis foliis, magno capite oblongo cæruleo*, ibid. *Ledum Alpinum minus hirsutum*, ibid. *Galega montana Dalechampii*, ibid. *Lapathum folio acuto Alpinum*. ibid.

From Geneva we travelled to Lyons, the second city in France for greatness, handsome building, trade, riches, and multitude of people; if any, setting aside Paris, may compare with it for any one of these, for altogether I am sure none can. But because we were hurried out of France by the King's declaration before we had finished one third part of our intended travels there: and because this relation is already swelled to a greater volume than I at first intended, I shall only set down the names of the chief places we saw, and plants we found in that part of France, where we spent our time till we returned home to England. In our journey from Geneva to Lyons we took notice only of two plants which were strangers to us, viz. *Valeriana rubra angustifolia*

folio J. B. about Nantua a considerable town in Savoy and *Anchusa lutea*, in some barren fields we passed through about a day's journey short of Lyons.

July 25. From Lyons we travelled to Grenoble, and thence to Grenoble. the grand Chartruse. By the way thither, but especially Le grand upon the mountains about this cloister, we found a great Chartruse. many plants which we had not met with any where before, to wit *Linariae aliquatenus similis folio Bellidis* J. B. In some fields about five or six leagues from Lyons in the way to Grenoble : *Catanance Dalechampii folio Cyani, flore Coronopi* J. B. On the sides of the mountains about half a league above Grenoble in the way to the grand Chartruse, *Melampyro affinis Parietaria cœrulea quorundam* J. B. ibid. in sylvosis. In the mountains about the cloister, *Sambucus racemosa* : *Circæa minima* Col. *Helleborus niger* Lob. *Trachelium majus* Belgarum ; *Radix Rhodia*, copiosissime ; *Gentianella Alpina verna magno flore* ; *Pulsatilla alba* J. B. *Solidago Saracenica* ; *Periclymenum rectum fructu nigro* Park. *Xylosteum Allobrogicum* i. e. *Periclymenum rectum fructu rubro* Ger. *Chamæmespilus Gesneri* ; *Imperatoria vulgaris* ; *Sonchus cœruleus latifolius* J. B. *Nerium Alpinum* quibusdam, aliis *Ledum glabrum* J. B. *Auricula ursi* ; *Victorialis longa* ; *Trifolium Alpinum argenteum* Park. *Helleborus niger Sannicula folio minor*. Park. *Pedicularis sive Crista galli montana* ; *Radix* ei simplex, alba, paucis fibris donata, magnitudine & figura radices *Tragopogi*, nisi quod longior sit, sapore non ingrato nucis *Avellanæ* paulo amariore. *Folia* ad radicem pauca [unum aut duo] alata, ex pluribus pinnarum conjugationibus *Filicis* ferè in modum composita, inferius hirsuta, in acutum desinentia, pallide viridia. Singulæ pinnæ ad margines serratæ *Cristæ galli vulgaris* folia benè imitantur. *Caulis* ab eadem radice singularis, dodrantalis aut pedalis, rotundus, firmus, nonnihil hirsutus, intus concavus, in summitate gestans spicam palmarem florum densè stipatorum, pallidè luteorum, *Cristæ galli* similitum, nisi quod vix sese aperiant, è calice ventricosò pentagono emergentium, pediculis nonnullis. In calice latet vasculum seminale turbinatum seminibus minutis rotundis repletum. Unum habet hæc planta in caule folium infra Spicam : in ipsa Spica ad singulos flores singula folia.

Horæ

Horminum seu *Pseudo-stachys* quædam Alpina. Radice nititur oblique acta, multis fibris prædita. Folia longis pediculis hirsuti, insident hirsuta & ipsa, rugosa, urticæ similia circa margines serrata vel dentata denticulis majoribus. Caules pedales hirsuti, medulla farcti, striati & quodammodo quadrati, plerunque duobus, interdum uno duntaxat foliorum pari vestiti: Folia quæ in caule iis quæ ad radicem similia, sed minora, & brevioribus pediculis (ut in hoc genus plantis solenne est) fulta. In summitate caulium spicæ breves compactæ, Betonicæ æmulæ. Flosculi galeati, lutei, è calicibus in 5 molliores spinulas terminatis exeunt. Julii 17 jam penè defloruerat.

Asteri montano purpureo similis J. B. Radix ei satis crassa, obliqua, intus nonnihil lutea, sapore acriusculo, fibris aliquot donata. Folia ad radicem plura, longa, angusta, figurâ ferè Polemonii petræi *Gesneri*, saturo virore splendentia, ad latera nonnihil pilosa, neq; dentata neq; serrata. Caules semipedales aut dodrantes, surrecti, foliis vestiti alternatim positos, iis quæ ad radicem similibus, ramosi, singulis ramulis florem sustinentibus Bellidis minoris, nisi quod limbus seu corona foliorum radiatorum in margine minoribus brevioribusq; foliolis constet colore purpurascete præditis, interiores aflosculi qui fundum floris componunt inter viridem quasi & luteum colorem ambigunt. In ascensu montium Julii 17 florentem inveni, & *Bellidem Alpinam* *Ramosam* flore purpurascete denominavi.

Ptarmica folio alato. Radix ei alba, obliqua, recens, fibris longis crebris firmata. Caules erigit cubitales, rotundos, inanes, brevi & vix perceptibili lanugine præditos, foliis crebris alternatim positos vestitos. Folia alata 4 aut 5 pinnarum conjugationibus constant; singulæ pinnæ circa margines dentatæ, & subinde etiam altius incisæ. Flores in summitate caulis velut in umbella, albi & *Ptarmicæ* vulgaris vel potiùs *Absinthii* albi umbelliferi floribus omnino similes. Nullus in hac planta vel odor vel sapor insignis: initio gustanti subamara videtur. In sylvis montosis Junio floret. *Bellis cærulea* caule nudo C. B. Hæc à *Globularia* vulgari Monspel. omnino specie diversa est.

Pentaphyllum argenteum Alpinum flore albo. Radicem non observavi. *Folia* quinquepartita reliquorum hujus generis more, exigua lanugine, molli, argentea utrinq; cadentia, in extremitatibus duntaxat crenata. *Caules* ex eadem radice plures, pariter villosi, infirmi, foliis duobus tribusve tripartito ut plurimum divisus vestiti; quæ appendicibus duabus caulem applectuntur, *flores* in summitate sustinentes duos vel tres pentapetalos, albos, cum numerosis intus staminulis purpureis apicibus ornatis. Vice styli congeries & velut fasciculus quidam filamentorum. *Calix* (ut in reliquis hujus generis) 10 foliolis hirsutis constat, quinque nimirum latioribus, quinque angustioribus alternatim positis: Est hoc *Pentaphyllum* foliis inferne, & superne incanis J. B.

Museus Alpinus flore insigni dilute rubente J. B. Hæc planta rectius meo judicio *Caryophyllus* aut *Lychnis* inscriberetur.

Cerithe quorundam major, versicolore flore J. B. Perennis esse videtur hæc planta; foliis est maculosis, *floribus* purpurascens pentagonis; *feminibus* reliquis sui generis minoribus, cum planta ipsa omnium maxima sit.

Alsine minima Alpina flore albo majore.

Hypericum nummulariæ folio C. B.

Planta quædam umbellifera Pimpinellæ similis, quam describere nescio quomodo omisi.

Orange. From *Grenoble* we travelled to *Orange*, in which journey we observed *Echinopus minor* J. B. which grows plentifully all over *Gallia Narbonensis*; *Fæcea cum spinosis capitulis purpurea tenuifolia* J. B. which is as common; *Thymum vulgare rigidius folio cinereo* J. B. This also is found every where in the stony grounds in this country; *Pulegium cervinum* by the *Rhosne* side at *Pont S. Esprit*; *Lavendula major sive vulgaris* Park. As common every where as *Thyme*; *Dentellaria Rondeletii*; *Acanthium Illyricum*; *Chondrilla viscosa caule xννμυδωδωρω* Col. *Echii sive Anchusæ* quædam species *flore carneo*, An *Lycopsis*?

Avignon. From *Orange* we proceeded to *Avignon*, whereabout we observed whole fields sown with *Fænum Burgundicum*: and besides what we found about *Orange*, *Paliurus*; *Cistus Ledon Monspeliensum*; *Cistus fæmina folio Salviæ*; *Malus granata*; quæ per totam *Galliam Narbonensem* fre-

frequentissima est: *Catananthe Dalechampi* flore cyani folio *Coronopi* J. B. per Galliam Narbonensem passim. *Helianthemum tenuifolium glabrum flore luteo* J. B. *Helianthemum flore albo, folio angusto hirsuto* J. B. *Fœniculum tortuosum* J. B. *Millefolium odoratum*; *Millefolium tomentosum luteum* J. B. quod non adeo vulgare circa Montpelium; *Stæchas citrina tenuifolia Narbonensis* J. B. *Capparis*; *Ilex coccifera*; *Genista Hispanica*; *Botrys*; *Cucumis asininus*; *Aspalathus* 2. *Monspeliensis* J. B. and many others which grow also about Montpellier.

Our next stage was Nismes, where, besides those mentioned about Avignon, most of which are also found here, we noted *Thlaspi bicutatum asperum hieracifolium* & *majus* C. B. *Psyllium semper virens*, *Camphorata Monspeliensum*, *Trifolium bituminosum*; *Ruta sylvestris*, *Peganium Narbonensium*; *Tithymalus ferratus*; *Lotus arbor*; *Convolvulus spicifolius*, *Plumbago Plinii*, *Scabiosa montana calidarum regionum* Lob. *Tithymalus Characas Amygdaloides*, *Papaver corniculatum luteum*; *Clematis sive Flammula repens* C. B. *Phyteuma Monspeliensum*; *Sideritis verticillis spinosis*; *Alkekengi*; *Clematis daphnoides major*; *Lepidium vulgare*; *Chondrilla viscosa caule xympyloides*, Col. Et quod nusquam alibi hactenus invenerim, *Abrotanum fœmina foliis Ericæ sive Unguentaria Luteianorum*.

From Nismes we travelled to Montpellier, where we abode all the autumn and part of the winter, during which time, though the season of the year for simpling was past, we observed the following plants.

Absinthium Seriphium Narbonense Patk. ad mare. *Acarna flore purpureo-rubente patulo* C. B. in aggeribus. *Acarna major caule folioso* C. B. in arvis non procul a Miravalle: Juxta vias eundo a Monspelio ad Pedenatium. *Alsine oblongo folio serrato, flore cæruleo* J. B. in muris. *Althæa frutescens folio rotundiore incano* C. B. In scopulis non longe à specu Frontignana. *Alypum montis Ceti*, &c. Lob. In Promontorio Ceti; vidimus etiam in montibus prope oppidum S. Chamas in Galloprovincia. *Anthusia angustifolia* C. B. in collibus juxta Castelneuf & aux Garigues. *Anthusia Monspeliaca* C. B. in colle arenoso non longe à Castelneuf versus Grammontium lucum. *Androsace Matth.* in fundo stagni Volcarum Estang dicto copiosissi-

me. *Aristolochia Piftolochia dicta*; in arvis quibufdam aux Garigues copiofe. *Anonis pufilla fruticans Gherleri* J. B. in collibus ficioribus. *Aphyllantes Monfpeliensibus* J. B. in collibus propè *Castelneuf* aliufq; oppido vicinis. *Aristolochia Saracenica* Ger. in vineis, foffis & aggeribus frequens. *Aspulathus 2 Monfpeliensis* J. B. in collibus petrofis abunde. *Aster conyzoides odoratus luteus* hort. Eyft. Ad viarum aggeres variis in locis. *Bellis cœrulea Monfpeliaca*. *Bupleurum folio rigido* C. B. In fylva Grammontia & fylva propè *Selnauf*. *Bupleurum angustifolium*; in locis faxofis non longè à *Boutonet*. *Galiba fimplici flore*, in agris frequens. *Carduus bulbofus Monfpeliensis*, fve *Acanthus fylveftiris* quibufdam foliis laciniatis J. B. In pratis circa Monfpelium paffim. *Carduus chryfanthemus Hispanicus* Cluf. Via inter *S. Lupian* & *Pedenatium*, & alibi propè urbem. *Carduus lanceolatus ferocior* J. B. Propè montem *Lupi*. *Carduus folftitialis*, ubique fere. *Chamelœa tricoccus* (*Chamæpitys fve Iva mofchata Monfpeliensium* J. B. in collibus faxofis. *Chondrilla lutea* J. B. in aggeribus ipsius urbis. *Ciftus mas 4 folio oblongo albido* J. B. *Ciftus Ledon Monfpeliensium* J. B. *Ciftus fœmina* Ger. Omnes hæ species in collibus & fylvis frequentes. *Clematis fve Flammula repens* C. B. in faxofis collibus & arvis arenofis. *Convolvulus fpicifolius* Park. *Conyza maritima cœrulea* an *Jacobæa quædam*? Circa *Peroul*. *Coris cœrulea maritima* C. B. in arenofis ad mare præfertim. *Cyanus pulchro femine Centaurii majoris* J. B. i. e. *Crupina Belgarum* Lob. in collibus propè flu. *Ladum* juxta *Castelneuf*. *Cyparus paniculâ fparfâ fpiciofâ* J. B. in pratis propè *Boutonetum* & *Castrum novum*. *Dorycnium Manfpeliense* J. B. in aggeribus fepium frequens. *Echinopus minor* J. B. i. e. *Carduus cœruleus fphærocephalus minor* C. B. in collibus & ad vias paffim. *Erica arborefcens Monfpeliensis*, flore purpurafcente, ramulis ternis J. B. in luco Grammontia. *Erica arborefcens floribus luteolis vel herbaceis minimis* J. B. ibid. *Ferula* Lob. *Fœniculum tortuofum*, paffim. *Geranium folio Althææ* C. B. juxta munitiones arcis, non procul à nivis reconditorio. *Geranium cicutæ folio, acu longiffimâ* C. B. Ad agrorum margines & in aggeribus. *Gingidium umbellâ longâ*, in prato quodam juxta viam quæ *Frontignanam* ducit copiofe, *Gnapbalium ad Stœchadem citrinam accedens*,

Dens, juxta fluv. *Ladum*. *Gramen minimum Dalechampii* J. B. in vineis, vere primo floret. *Gramen parvum pulchrum paniculâ compressâ nigricante* J. B. in aquosis. *Hedypnois Monspeffulana sive Dens leonis Monspeffulani* J. B. in aggeribus terrenis passim.

Helianthemum tenuifolium glabrum flore luteo J. B. in collibus aridioribus passim. *Helianthemum flore albo folio angusto hirsuto* J. B. in collibus *Castro novo* vicinis & alibi. *Herba Dorica* Lob. Ad *Ladum* amnem copiose. *Herniaria glabra*, in prato quodam juxta lucum *Grammont*. *Hieracium parvum hirtum caule apophyllo* J. B. in arenosis collibus prope *Sellam novam* & alibi passim. *Holostium Plantagini simile* J. B. in aggere quodam inter urbem & *Ladum* amnem. *Hypericum tomentosum* J. B. in humidioribus circa *Selneuf* & alibi. *Hex coccifera*, in collibus saxosis. *Facea cum spinosis capitulis purpurea tenuifolia* J. B. passim. *Facea montana capite magna Strabili* J. B. in collibus juxta *Castelneuf*, *Selneuf*, &c. *Facea lutea capite spinoso* C. B. satis frequens in pascuis & collibus. *Kali majus semine rochleato* Ger. In litoribus maris & salis palustribus. *Lathyrus major Narbonensis angustifolius* J. B. in collibus quos *Garigues* vocant. *Leucium maritimum angustifolium*, in lingua illa inter stagnum *Volcarum Estang* dictum & mare. *Linum marinum luteum* Ad. in pratis circa *Sellam novam*, *Castrum novum*, itemq; ad mare. *Linaria lutea parva annua* J. B. in summitate montis *Lupi*. *Lotus filiquosa lutea Monspelienfis* J. B. in collibus & pascuis. *Marrubium nigrum longifolium* i. e. *Herba venti Monspelienfium*, in aggeribus & ad vias. *Moly moschatum capillaceo folio* C. B. prope sylvam non longe à *Selneuf*; & in collibus quos *Garigues* vocant.

Orobis receptus herbariorum Lob. in agris passim. *Pseudanum vulgare* prope sylvam *Grammontium*. *Phyllon arrhenogonon & thelygonon* J. B. in aggeribus fossarum & præcipue secus fluvios, *Phyteuma*, passim. *Polemonium sive Trifolium fruticans* Ger. in sepibus vulgariss. *Prunella angustifolia* J. B. *Pulegium cervinum angustifolium* J. B. in locis ubi per hyemem aquæ stagnarant. *Polygoni quædam species erecta*, an *Arenaria* J. B. Ad agrorum margines. *Rhus folio Ulmi* C. B. in collibus prope *Castelneuf* copiose. *Rhus myrsifolia Monspelienfis*. Ad sepes, præcipue

cipue verò ad ripas *Ladi* amnis. *Rubia maritima*, in lingua illa inter *Estang* & mare. *Scammonea Monspeliaca foliis rotundioribus* C. B. ad mare prope *Peraux*, villam novam, &c. *Scorpioides filiqua campoides hispida*, in aggeribus munitionum. *Securidacæ* genus *triphyllon* J. B. in collibus prope *Castelneuf*. *Sideritis Monspessulana* J. B. Prope patibulum, aux *Garigues*, &c. *Sideritidis* genus *verticillis spinosis* J. B. in agris copiose. *Sinapi echinatum* J. B. inter segetes. *Smilax aspera* J. B. Ad fepes passim. *Sonchus lanatus Dalechampii* J. B. *Sonchis affinis Terracrepola*, in pascuis. *Stæchas Arabica*, in *Grammontia* sylva copiose & in sylva prope *Selneuf*. *Stæchas citrina tenuifolia Narbonensis* J. B. passim. *Stæchadi citrinæ affinis capitulis parvis raris squamosis*, in pappos evanescentibus J. B. in fissuris rupium juxta *Castelneuf* & alibi. *Tamarix major five arborea Narbonensis* J. B. Ad mare copiose. *Telephium scorpioides* J. B. circa *Castelneuf*. *Thlaspi clypeatum serpylli folio* C. B. *Thlaspi fruticosum spinosum* C. B. in rupibus in summa parte montis *Lupi*. *Thlaspi umbellatum tenuiter diviso folio amarum Narbonense* J. B. in arvis prope patibulum & alibi. *Thymum vulgare rigidius folio cinereo* J. B. in aridioribus passim. *Tragos five Uva marina minor*, ad mare copiose. *Tribulus terrestris*, in agris passim. *Trifolium argentatum floribus luteis* J. B. in collibus prope *Castelneuf* & alibi in agro *Monspeliaco*. *Trifolium hæmorrhoidale seu Lotus Libyca Dalechampii*, ad ripas *Ladi* amnis. *Trifolium stellatum purpureum*, circa patibulum & alibi. *Valeriana rubra angustifolia* C. B. in rupibus montis *Lupi*. *Verbascum syvestre Monspeliense flore luteo hiante* J. B. in collibus saxosis. *Vinca pervinca major*. Ad fepes.



O F

MONTPELLIER.

MONTPELLIER is a round town, standing upon a hill in the midst of a stony country; somewhat bigger than *Geneva* but not so populous. The number of inhabitants at present being about 25000, of which two third parts are *Papists* and one *Protestants*. The *Protestants* have two churches (temples they call them) in town. The streets of this city are very narrow, short, and crooked, without any uniformity or beauty at all, so intricate that it's half a year's work to understand them all, and learn the way from place to place. The houses are many of them well built of free-stone, which, were they set well together in order, would make three or four handsome streets. No large piazza or market-place in town. The number of apothecaries in this little city is scarce credible, there being thirty shops, and yet all find something to do: their *cypres powder*, *sweet-bags*, *cassolets*, *treacle*, *confectio alkermes*, & *hyacintha* having a name all *France* over. The *Queen of Hungary's water* (as they call it) made here is likewise much bought up. It is nothing but common spirit of wine in which *rosemary* flowers have been macerated, distilled from the said flowers. The wines hereabout are very strong and bear water well. Their vineyards are of dwarf vines without any support, the standards, when the branches are prun'd off, being like the standards of our osier-gardens.

The manner of making verdet,

At *Montpellier* the best verdet or verdegreece (*Viride aris*) is made. They told us that so good could not be made elsewhere though they used the same method and the same materials, whether it be to be attributed to the just temper of heat, or the nature of the wine they use, or some other unknown quality. The manner thus,

First they take grape-stalks well cleansed from the raisins and from all filth, and putting in the bottom of a pot a quantity of the best red wine, they set sticks cross a little above the wine, and upon them lay a quantity of grape-stalks first also drenched in wine, and let them alone about fifteen days, more or less, according to the season, till they come to make (as they call it) a rose, that is, the outsides become to appearance dry, and the middle only wet. These grape-stalks being thus prepared, they put in the bottom of a large earthen pot of the best red wine that begins to be fowre, but is not yet come to be vinegar, to the quantity of about two or three inches depth; somewhat above the wine they set sticks cross the pot, and having ready many little plates of copper, they lay upon the cross sticks first a layer of the prepared grape-stalks, then a layer of copper plates, and so alternately S S S till the pot be full. In the middle of the pot they usually leave a hole all along for the vapour of the wine to ascend; neither are the copper plates laid near together for the same reason.

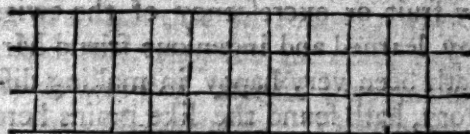
When they have filled up the pot they cover it, and set it in a cellar, and after some five or six days turn the copper plates, letting the pot remain in the cellar three or four days more. In eight or ten days, according to the season, the *Verdet* will be come. Then they take out the plates, and, laying them six or seven on a heap, put them in a trough, and sprinkle the edges of them with the same wine for three or four days; next they press them with heavy weights for four or five days; and last of all scrape off the *Verdet* with knives, and, moulding it with a little wine, dry it and sell it.

The same plates are again put into pots, and used as before. So then the *Verdet* is nothing but the rust or scurf of the copper calcin'd by the vapour of the wine.

Here

Here also we saw the manner and process of blanching of bees wax.

First they melt the wax in a great copper cauldron, then they have ready a mould or form of wood of the figure of a sugar-loaf, or the block of a steeple-crown'd hat, which, having besmear'd over with slime of snails, they dip into the wax thus melted. This takes up a skin or film of wax, as candles upon dipping do. This they smooth with their hands and dip in water, and when it is cold take it off the form, from which, by reason of the anointing the form with the foremention'd mucilage, it will readily slip in the form of a cone, or long crucible. These cones (so let me call them) are set in a garden in ranks singly one by one, supported with canes or reeds crossing one another on this fashion,



Round about they set pots with water, wherewith they sprinkle the wax often to keep it from melting. In summer-time, when the sun lies hot upon it some six or seven times a day, otherwiles but three or four times. In fourteen or fifteen days the upperend of these cones will grow white, and then they turn them to whiten the other end. In a month's time, more or less, according to the weather, they will become white all over. Then they melt the wax again in earthen pans like *Mete* or scuttles, and run it so melted through the nebe of a tin pot into water, and as it runs down into the water, a man either breaks it with his hand into grains, or works it into round figures like spiral wreaths or *correlle*, and these they expose again to the weather in the garden, and order as before, till they become purely white; and then melt into great pieces to sell. The mucilage wherewith they besmear the forms is made of snails taken alive, shells and all, and pounded in a mortar till they become a perfect pap or *viscus*. The form once besmear'd well over with this pap will last dipping many times. Wax whiten'd is almost twice as dear as

yellow wax. Yellow wax is solutive, and used where there is an inflammation and the sore not ripe; white wax on the contrary very astringent. They say *Montpellier* is a place proper for the whitening of wax; and that the same workmen, coming over into *England*, found the air of a different temper, and not convenient for this trade.

*Confectio
Alkermes.*

At *Montpellier* is made the best *Confectio Alkermes*, as reason there is it should, the grain which gives it its denomination being in no country of *Europe* found so plentifully as here. The manner of the preparation of this grain for the making the confection you may find set down in the *Philosophical Transactions*, Numb. 20. pag. 362. and I shall therefore here omit. These grains have formerly been thought to have been proper to the dwarf or shrub *Ilex*, called therefore *Ilex coccifera*, and a by-fruit or excreescency of the twigs of that plant. But my learned and ingenious friend Mr. *Martin Lister*, who hath been very happy in making discoveries in natural history, hath found the like grains here in *England* upon the twigs of cherry and other trees, and judged them to be the work of an insect, and by her affixed to the twigs for nests to breed and harbour her young; and indeed to me they appeared to be so, easily receding and falling off from the wood when the young are hatched and gone. As for the grains themselves they are so like the *Kermes* grains, that they are scarce to be distinguished and grow to the twigs just in the same places and manner. But, for a more full and compleat history of them, I refer the reader to Mr. *Lister's* Letters published in the *Philosophical Transactions*.

The man-
ner of
making oil
olive.

At *Montpellier* I observed the manner of making oil olive: first they take olives, whether fresh gathered or laid a while on a heap it matters not (as they told me) and bruise or grind them to a paste, as we do apples to make cyder, with a perpendicular mill-stone running round in a trough. This paste, or the olives thus bruised, they put in round thin baskets made of *Spartum* like frails, having a round hole in the top; but both top and bottom clapping together, so that when pressed they look like a thin round cake. Half a score or more of these baskets filled with olive pounce they lay on a heap in the press, and

and, letting down the press-beam, squeeze them at first without any mixture. Then winding up the beam they take out the baskets, and into each one put a good quantity of scalding water (which they have always ready) and shaking the basket mingle it with the pounce, and then, piling them one upon another as before, press them down a second time. This second operation they repeat again, and then taking out the pounce put in new, and proceed as before. The oil, together with the water, runs out into vessels set to receive it. The water, with the *Amurca*, sinks to the bottom, and the oil swims above it, which they take off with a copper dish like a floating dish, as good housewives skim the cream from their milk. The water mixed with the red juice of the olive becomes red and thick, not at all mingling with the oil, so that it cannot easily the least drop of it be taken up without perceiving it. It's said that in *Provence* they spread their olives on a floor after they are gathered, and there let them rest thirty days to dry, and for that reason their oil is better than that of *Languedoc*. Others lay them on a heap a while to let them sweat, as they call it. It is worth the noting that though the olives be very bitter and of a fiery ungrateful taste, yet the oil which is drawn from them is sweet; the like is observed in bitter almonds, and it is very likely might be in all other bitter fruits; which is a sufficient proof that the taste of such fruits doth not inhere in the oil, at least which is made by expression; and it deserves examination, whether the chymical oil may not also be divested of the taste of the vegetable from which it is extracted.

Olives when they come to maturity change colour and become black as some other plums do, but it is very late in the year first. They are then notwithstanding of a horrid and ungrateful taste, firing the throat and palate of one that eats them. They afford most oil when full ripe, but best (as they told us) when gathered and pressed green. Sometimes they pickle ripe olives, but they will not last; therefore those which they pickle to send abroad are gathered green. The pickle they use is nothing else but a brine of salt and water.

Near *Peroul* about a league from *Montpellier* we saw The boiling fountain (as they call it) that is, the water did
heave
tain,

heave up and bubble as if it boiled. This phenomenon in the water was caused by a vapour ascending out of the earth through the water; as was manifest, for that if one did but dig any where near the place, and pour water upon the place new digged, one should observe in it the like bubbling, the vapour arising not only in that place where the fountain was but all thereabout. The like vapour ascending out of the earth, and causing such ebullition in water it passes through, hath been observed in Mr. *Hawkey's* ground about a mile from the town of *Wigan* in *Lancashire*, which vapour by the application of a lighted candle, paper, or the like, catches fire and flames vigorously. Whether or no this vapour at *Peroul* would in like manner catch fire and burn I cannot say, it coming not in our minds to make the experiment.

From *Montpellier* we took a journey of pleasure to see the adjacent country, and first we rode to *Frontignan*, a little walled town by the estang side, three miles distant, which gives name to the so famous muscate wine. The country about this town toward the sea southward lies open to the sun, but toward the land northward it is encompassed with a ridge of hills in form of a bow, touching the sea at each end; so that the whole is like a theatre: in the *Arena*, and on the sides of the hills, grows the muscate grape of which this wine is made. In this space are contained two other little towns, the one called *Miraval*, the other *Vich*. This last gives name to a mineral water, springing near it, much used hereabout. It hath an acid vitriolic taste, but nothing so strong as our spaw-waters, and therefore I guess the operation of it is much weaker.

The manner of drying grapes to make raisins.

At *Frontignan* and other places we saw the manner of making raisins [*uvæ passæ*.] They take the fairest bunches, and with a pair of scissers snip off all the faulty grapes, and tie two bunches together with a string. Then they dip them in a boiling ley [*lixivium*] into which they put a little oil, till they are very plump and ready to crack. *Jo. Bauhinus* saith, that they let them continue so long in the boiling *lixivium*, *quoad flaccescant tantum & corrugentur*. But we observed no such thing, for they did not continue the bunches half a minute, but presently

presently took them out again and washed them in a vessel of fair cold water, then they put them upon wooden poles for two or three days in the shade to dry, and after that exposed them to the sun, taking them in the night-time or rainy weather. *Cyprianus Eichovius* describes the manner of making raisins in *Spain* thus: There are (saith he) two sorts of *Uva passæ*, or raisins: the one of those those call raisins of the sun, of a blue colour, the other of the *Uva passæ Lixa*, which they call frail or basket-raisins. In preparing the first sort they thus proceed. When the bunch they design for that purpose begins to grow ripe, they cut the foot-stalk of it half asunder, that so the radical juice or moisture may be at least in a great measure detained, and not pass to the grapes; and so they leave it hanging on the vine. Then by the heat of the sun the grapes are by degrees dried. When they are sufficiently dry they gather them and put them up in vessels.

The second sort they make on this fashion. When they prune their vines, they bind up the cuttings in faggots and reserve them till the vintage time. Then they burn them and of their ashes make a ley or *lixivium*, which they boil in great vessels, and therein immerse the bunches of grapes one by one. Afterwards to dry them they spread them upon a paved floor clean swept, made for that purpose in the vineyard, that so they may be the more speedily dried by the sun-beams. When they are sufficiently concocted and dried they put them up in frails or baskets. After the same manner they prepare figs for to dry, by dipping them in a *lixivium* made of the ashes of the dried branches of the fig-tree cut off in pruning. But however they superstitiously observe to make their *lixivium* for raisins of the ashes of branches pruned off the vine, &c. I doubt not but the ashes of any wood indifferently taken would serve as well for that purpose.

From *Frontignan* we rode to *Balleruch*, to see the Baths at hot waters which are used as well inwardly as outwardly. *Balleruch*. At our being there, which was in the beginning of *September*, the water was scarce lukewarm; they told us that in the winter it was very hot. The bath is not above two flight-shots distant from the estang, and the water thereof tastes very salt and brackish; whether

by

by reason of the sea's being so near it, or because the water comes from some salt mine I know not, yet the latter seemeth the more probable, because, should it come from the sea, the water straining through so much sand would probably lose its salt by the way, as we have found by experiment in *England*.

A fountain of
Petroleum.

At *Gabian* about a day's journey from *Montpellier* in the way to *Beziers* is a fountain of *Petroleum*. It burns like oil, is of a strong pungent scent, and a blackish colour. It distils out of several places of the rock all the year long, but most in summer time. They gather it up with ladles and put it in a barrel set on one end, which hath a spiggot just at the bottom; when they have put in a good quantity they open the spiggot to let out the water, and when the oil begins to come presently stop it. They pay for the farm of this fountain about fifty crowns *per annum*. We were told by one monsieur *Beaufoste* a chymist in *Montpellier*, that *Petroleum* was the very same with the oil of jet, and not to be distinguished from it by colour, taste, smell, consistency, virtues, or any other accident, as he had by experience found.

Upon the coast of the *Mediterranean* sea in several places, as at *Berre*, near *Martegue* in *Provence*, at *Messina* in *Sicily*, &c. they make * salt of the sea-water drawn into shallow pools and evaporated by the sun-beams in summer time. First, they let the water into a large shallow plain like the cooler in a brew-house, and there being well heated they run it into several shallow beds like the beds of a garden; when the sun hath dried up all the water they let in more, and so again three or four times till the salt remaining at the bottom of these receptacles come to be three fingers thick, and then they take it up with shovels, and heap it on little hills: but the whole process of this operation being exactly described in the *Philosophical Transactions* Numb. 51. page 1025. I shall forbear to enlarge any further concerning it.

Now that I have mentioned *Martegue*, I shall add the manner of making † *Botargo*, out of Mr. *F. Willughby's* notes. At *Martegue* they take abundance of mullets [*Mugiles* not *mulli* as one would be apt to think by the *English* name] in their *Burdigo's*, which are places in the

* Making of salt by evaporating sea water by the sun-beams.

† The preparation of *Botargo*.

shallows, inclosed with hedges of reeds. The male mullets are called *Allettants*, because they shed the milt [*Lac piseum.*] The females *Botar*, of the rows or spawn of which *Botargo* is made. They first take out the spawn intire, and cover it round with salt for four or five hours: then they press it a little between two boards or stones; then they wash it, and at last dry it in the sun for thirteen or fourteen days taking it in at nights.

Decemb. 7. 1665. from *Montpellier* we made an excursive voyage into *Provence*. The principal cities and towns that we saw were 1. *Lunel*, about four leagues distant from *Montpellier*. 2. *Arles*, a considerable city once the head of a kingdom, called anciently *Arelate*, standing upon the river *Rhone*, which a good way above this city divides itself into two branches, and makes an island called the *Camarg*. All this island is full of *Vermicularis frutex* growing by the ditch sides all along. Beyond this city in the way to *Marseilles* we passed over a large plain or level all over covered with stones, called now the *Craux* or *les Champs pierreux*, anciently *Campi lapidei*, to 3. *St. Chamas*, a large burgh standing upon the ridge and on each side a narrow hill, which is perforated like *Pausilypus*. Upon the rocks near this town I found *Seseli Æthiopium frutex* growing in great plenty, as also *Alpium montis Ceti*, *Coris Monspessulana*, *Ruta sylvestris minor*, *Colutea caule Genista fungosa*. J. B. We observed also this day, all along as we rode upon the hills and by the way sides, our common furze or *genista spinosa*.

Lunel.
Arles.

St. Chamas.

4. *Marseilles*, an ancient city not great but well built with tall stone houses for the most part, and very populous. We were told that the number of souls was about 120000. The streets are narrow as in most of the ancient towns in this country, to keep off the scorching beams of the sun in summer time. The haven is the most secure and commodious that I have seen: the entrance into it is so strait and narrow that a man may easily cast a stone cross it, but the haven within large enough to contain 500 vessels or more: of an oval figure. On one side of this haven the town is built which compasses it more than half round, having before it a handsome kay well paved, which serves the citizens for a walk or promenade. This haven is not capable of ships of above 600 tun. On the

Marseil-
les.

Bausset.
Ollirole.
Toulon.

the rocks near this town I found growing plentifully the same *Calutea* I observed at St. Chamas: *Valeriana rubra* Dod. *Carduus galactites* J. B. By the sea-side *Tragacantha Massiliensis* plentifully. *Aster luteus supinus* J. B. *Tithymalus myrsinites angustifolius*; *Coronopus Massiliensis* Lob. 5. Bausset. 6. Ollirole, two little towns. 7. Toulon, no great town, but well fortified, and the best haven the King of France hath on the Mediterranean sea, having a large bay capable of the greatest vessels, where there is good riding for ships. At Toulon they make holes in their stone-walls at three or four foot distance, near the ground, and there plant capers, the fruit whereof they prepare and pickle after this fashion. They gather the buds or blossoms of the flowers before they be explicated, and, spreading them thin, lay them in the shade to wither for three or four hours, to prevent the opening of the flower. Then they put them in a vessel, and pour vinegar upon them, covering the vessel with a board, and so let them stand for nine days; at the end whereof they take them out and press them gently, and put them in fresh vinegar, letting them stand as long as before: this done the third time, they put them up in barrels with vinegar. Some mingle salt with their vinegar, which is the best way, and preserves the capers for three years both for colour and taste as good as at the first. I observed near Bausset great plenty of *myrtle* in the hedges; near Ollirole *Acanthus sativus*; *Althæa frutescens folio rotundiore incano* C. B. *Fumaria minor sive tenuifolia surrecta* J. B. *Acacia trifolia*; *Teucrium vulgare*; *Arisarum latifolium*; *Chrysosoma* Ger. 8. St. Maximine, near which is the famous grot of *Mary Magdalen*, called St. Baulme. 9. Aix, anciently *Aquæ Sextiæ* from the hot baths that are there. This is a very elegant and pleasant city, well built with fair stone houses, having broad streets and handsome piazzas.

St. Maximine.
St. Baulme.
Aix.

Selogne.

10. Selogne, Salonia. In the *Cordeliers* church lies buried *Nostradamus* the famous French prophet, whose verses the Frenchmen esteem as oracles. In the church wall is placed a stone with this inscription to his memory.

D. M.

D. M. Clariss. ossa M. Nostradami unus omnium mortalium judicio digni, ejus pene divino calamo totius orbis ex astrorum influxu futuri eventus conscribentur. Vixit an. 62. m. 6. d. 10. Obiit Salo: MDLXVI.

Quisem posteri ne invidete. Anna Pontia Gemella Salonia conjugii optimo V. F.

11. *Aiguemortes*, a small town but of great strength near the sea in a fenny place some six leagues distant from *Montpellier*.

From *Montpellier* we returned to *Lyons*, from *Lyons* we travelled with a messenger to *Paris*, from *Paris* again to *Calais* and so cross the strait to *Dover*: whence we at first set out and began our journey.

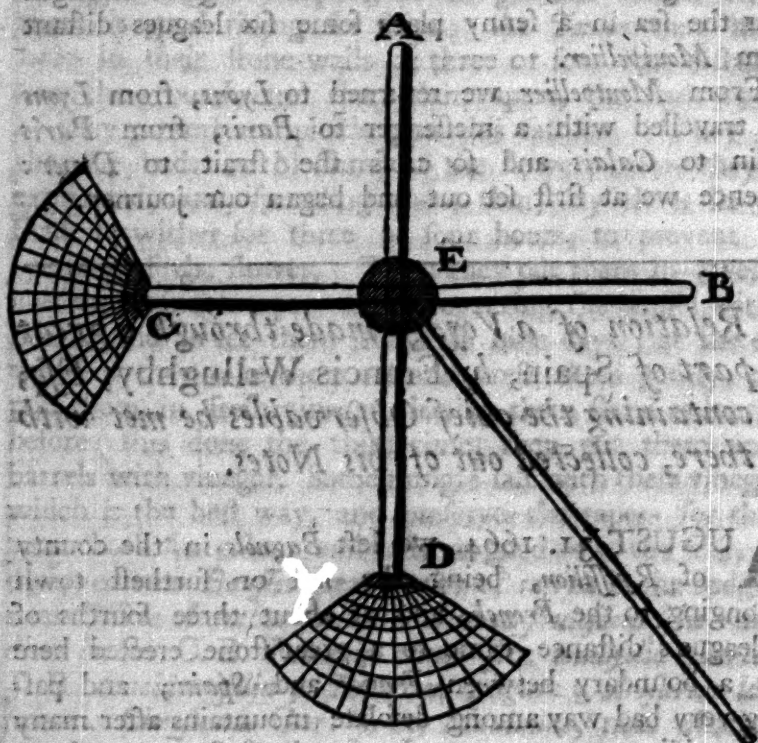
A Relation of a Voyage made through a great part of Spain, by Francis Willughby, Esq; containing the chief Observables he met with there, collected out of his Notes.

AUGUST 31. 1664. we left *Bagnols* in the county of *Roussillon*, being the last or furthest town belonging to the *French*, and at about three fourths of a league's distance came to a great stone erected here for a boundary between *France* and *Spain*; and passing very bad way among desolate mountains after many hours riding we came to *Lansa*, the first town of the King of *Spain's* country. All along these mountains grew rosemary, common furze or gorse, and *Agnus castus* of two sorts, the one with a carneous, the other with a blue flower. From *Lansa* we went on the same day as far as *Cau de Creux*, five leagues or twenty *English* miles from *Bagnols*. Among these mountains we met with no brooks and scarce any water.

September 1. We intended to have seen the coral-fishing here, but the windy weather hinder'd us. The sea must be very calm and smooth, else it is impossible for

for them to fish for it. It grows downward (as the urinators told us) under the hollow rocks, and not upwards as trees. I believe rather that it grows indifferently either upwards or downwards according to the situation of the rocks.

The engine they use to get it is a great cross of wood ABCD, that at the middle E hath a huge weight of lead made fast to it, and at each end A, B, C, D, a round



net. To the lead at E is fasten'd a long rope. They go out in little boats and let down this cross; and when they have found a rock at the bottom of the sea, he that manages the rope thrusts it into the hollows, getting in one or two of the legs, and if there be any coral it entangles in the nets at the end of the cross by which it is torn of and brought up. The natural colour of the coral, while it is alive and growing to the rocks, is a pale carneous; but when the scurf (which answers to the bark in trees) is rubbed off, it is red. The coral

coral that dies or is broken off from the rocks loses that carneous scurf or bark in the sea and becomes red, though sometimes it gets a greenish white rust. They say it is fifty years before it comes to its full growth: but that I conceive is an ungrounded conjecture. They sometimes but very rarely find branches of three or four pounds weight. It rots, dies, grows light, worm-eaten, and full of holes like wood. They all affirmed it to be hard and not soft as it grows under water, contrary to the current tradition of the antients, *Mollis fuit herba sub undis*. I believe the outward scurf or bark may be soft, it easily crumbling off afterwards, which might give occasion to the fable. They told us that a piece of coral (having the carneous scurf upon it) wetted is just the same as when it is first taken out of the sea. The best coral rude as it is found is worth a pistole the pound, or two or three pieces of eight: polished and wrought into beads, bracelets, &c. at *Marseilles* it is sold for thirty, forty, and sometimes sixty sols (*i. e.* so many pence) the ounce. They find here white coral also but very rarely.

Near *C. de Creux* upon the mountains they find a kind of *Selenitis*, which may be cut or slit into very thin plates, like the common *Muscovy* glass.

Upon the shore are thrown up *conchæ veneræ* of several sorts and magnitudes, and other small shells of affinity to them, which they call *Porcellane*. These they put in the juice of lemons or citrons, and set them out in an open bottle all night. The dew mingling with the acid juice dissolves the porcellane. This liquor they use for a cosmetic.

They catch fish about *C. de Creux* as at *Naples*, by hanging a fire-brand or other light at the end of the boat, which intices the fish into the nets.

This day we passed by *Rosas* a strong garrison, *Castillon*, *Villa sacra*, and lay at *Figera*.

Sept. 2. We passed *Crispia*, *Basalon*, *Argelagues*, *St. Ja* and lay at *Castel-foulet*, five leagues. All the way we observed abundance of pomegranate-trees. *C. Foulet* is a small garrison.

3. We passed by *Aulot*, where we saw a *busaloré*, of which there are divers in that town. It is a hole or cave, out of which continually issues a cool air. They

keep bottles of wine, fruit, &c. in a little house built over the cave. The wine here kept drinks as cool as if it were kept in ice or snow. They say that it is the water running and falling down under the ground that makes these *Spiracula*, which is not unlikely. They are all on the left side of the river as you go to *Vià*, and none on the right. This day also we passed *Rhoda* and lay at *Vià*, seven leagues.

4. We went to the hill where the amethysts or violet-stones are found distant two leagues from *Vià*, called *St. Signinont*. On the top of the hill is an hermitage and place of devotion, where *Signinont* a *Burgundian* King did penance. The amethysts are found lower in the side of the hills. Viscount *Jacque* is lord of the soil, and whoever opens a mine pays him a pistole and an half *per mensem*. They find the stones by following a vein of reddish or black earth, or a vein in the rock so coloured. They are all hexangular, and pointed like chrystal. There are of three sorts, the best are the blackest or deepest violet. 2. Others are almost quite white. 3. Some, but very rarely, are found tinged with yellow. They sometimes stick a great many together to the rock like the *Bristol* diamonds, but those are never good: the best are found loose in the chinks of the rock, in a fat yellowish or reddish earth. They scrape out this earth with long narrow knives that enter into the chinks, and then crumble it in pieces with their fingers to feel for the stones. They are afterwards ground and polished upon leaden moulds after the same manner as chrystal is. First they use the dust of *Smiril* or emery, and at last of *Tripoli*. All along the way to this hill we saw abundance of *Arbutus* and *Rhus coriariorum* called *Rhondo*. In this country they use not bark of oak to tan their leather, as we do, but the leaves and branches of this shrub, which they first bruise with a perpendicular stone, and then mingle with water, and, heating the water lukewarm, steep the skins in it three or four days. In these mountains are also found emeralds, gold and other sorts of minerals and stones, but it doth not turn to account to search for them. Topazes are found in a lake call'd the lake of *Silles*, not far from *St. Colonna* near *Girona*. They find them upon the shore of the lake.

At

At *Vic* there is a great market-place, and a church *Sept. 5.*
at a *Convent*, said to have been built by *Charlemagne*
when he had discomfited the *Saracens*, and driven them
out of *Catalonia*. This night we lodged at *Moia*, hav-
ing travelled only three leagues.

We rode within sight of *Montserret*, broken at the 6:
top into rocks standing like the teeth of a saw, from
whence it took its name. There is a chapel of our
Lady, a place of great devotion. This night we lodg'd
at *Casa della pobla*, a single inn, five leagues.

We came to *Gardona* two leagues. All the way as 7:
we rode, the rocks and stones were full of round holes,
just like those in the stones at *Ancona*, in which the
Pholades harbour; and there is no question but these
holes have been made by some animal before the stones
were harden'd.

We viewed the mountain of salt, where were three 8:
officers, one to weigh the salt, another to receive mo-
ney, and the third to keep accounts. The revenue of
this salt amounts yearly to about 30,000 pieces of eight.
For every quintal, that is 104 pounds, they pay 10 *reals*
of two *sous* to a *real*. The salt is hard and transparent
like chrystal, and, when powder'd fine, as white as snow.
They hew it out with axes and mattocks; and make
chaplets, boxes, &c. of it. They say there is no end
of it, but that it reaches to the center of the earth.
Near the place where they work there are two caves
within the rock of salt, to the end of one of which
they never durst venture to go.

Not far from this there is another mountain of salt,
where the salt sticks to the rocks, and is most of it
tinctur'd with red. Of this red salt they make broad
plates like tiles, which they call *Ruggiolas*; these they
heat before the fire, but never put them into it, and use
them to take away aches, strengthen the stomach, keep
the feet warm, &c. Well heated on both sides, they
will keep warm for twenty-four hours. Amongst this
red salt there is a kind of *Selenitis* (which some call
ising-glass, and the *Italians* *Gesso*, from the *Latin* word
Gypsum, signifying chalk, because when burnt it is turned
into a white *calx*) which naturally roches into paralleli-
pedums of the figure of a lozenge. Of which sorts of

stones are found in several places of our nation. About these mountains of salt grows great plenty of *Halimus* and *Limonium*.

Cardona is a dukedom containing three or four villages besides the town. The Duke thereof is one of the the richest grandees of *Spain*, having three dukedoms, four marquises, two earldoms, &c. The name of his family is *Folke*. He lives for the most part at *Madrid*, but sends every three years a governor. The King of *Spain* hath nothing at all to do with this city: and the Duke never imposes any taxes, but hath only all the tithes of the corn, wine, &c. There is a council of thirty fix changed every year, and he that hath been of the council must wait three years before he can be chosen again. The last thing the council does is to choose a new council for the year following. This new council is divided into four ranks, not equally, but as the old council shall think fit; and their names are put into four boxes, out of every box a child takes out one to be consul. He that is drawn out of the first box is the first consul, and so in order. Near the town is a castle, and in the castle a tower said to be built by *Charlemagne*. Every Duke hath an oath given him by the consuls, wherein is an article that he must reside in the castle, which is never kept.

Sept. 9.

We passed through *Kalah*, and lay at a single inn a league and a half further, four leagues and an half distant from *Cardona*.

10.

We passed through *St. Columba*, *Roccafert*, and lay at *Sirreall* five leagues and an half.

11.

We passed by *Pobla* a famous ancient monastery, about two leagues distant from *Sirreall*. In the church there are a great many monuments. They told us, that thirteen Queens and seven Kings lay interred there. Then we passed *Praves*, and lay that night at *Coulnouvil* five leagues. All over *Catalonia* they reckon a league two hours, and make account that four *Catalonian* leagues are equal to six *French*. We heard that there were amethysts also found about *Praves*.

12.

We passed by *Falsot*, two leagues from *Coulnouvil*, where are a great many lead-mines. The ore is very rich, and they melt it just as it is taken out of the mine,

mine, without beating it to powder. They sell the ore for forty *Reals* of *Ardit* the quintal, a quintal being 122 pounds: Five quintals of ore usually yield four quintals of lead. This town and the mines about it belong to the Duke of *Cardona*. They told us, that the vein of metal lay always east and west. The best and finest of this ore they grind to powder, and thereof make varnish to lead earthen pots and vessels with, sprinkling the powder upon the pots. This night we lay at *Tivisa*, four leagues.

We passed *Venu-falet*, *Tivians*, and lodged at *Tortosa*, 13. six leagues. All along the way we saw a great deal of *Palma humilis Hispanica non spinosa*. The fruit grew up in bunches out of the ground like the berries of *Arum*, and was not much bigger. Those that were ripe were of a reddish colour, of an oblong figure, and divided into four quarters: those that were less ripe were yellowish. The skin and pulp very thin, and did but just serve to cover the stone. It hath the smell and taste of dates. The stones being broken are not at all hollow, but have a hard white kernel or pearl within them. We observed also abundance of *Garoffus* (as they called it) i. e. *Caroba* five *Siliqua dulcis*, the cods whereof they give their mules instead of provender. The *Spanish* soldiers at the siege of *Barcellona* had nothing but these *Siliquæ* and water to live upon. All over *Catalonia* the people are generally poor. They use neither glass nor paper in their windows, but only shuts of wood.

Tortosa is a very poor and desolate town. There is a bridge of boats over the river *Iberus*, now called *Ebro*, in sight of which we rode all along from *Tivisa* hither. At *Tortosa* they were wont to make salt-fellers, mortars, bowls, beads, &c. of a kind of marble of a mingled colour, red and yellow, found near the town, which they call *Jasper*, and of another greenish marble spotted with black, brought from *Genoa*.

We went to the jasper mine about two miles from the town, with one of the chief workmen. We saw there vast pillars hewn out and wrought for a church in *Palermo*. He told us, that all the veins of marble, jasper, &c. went from east to west; that they sawed these

these stones to make tables, &c. with only water and sand; that, when there was not enough red in the stone, they made little holes and set in red stones; that the cement, they used for all stones in mosaick works, was made of one half mastich, and one half Greek pitch; that in building they joined the stones together with ordinary lime, but on the outside they filled up the chinks with a cement made of the powder of the jasper, mingled with sulphur and *Mangra*; to make it more white, they put in more sulphur, to make it more red, they put in more *Mangra*. The jasper was hew'd out with chizzels and hammers, just as stone in our stone-pits. It is afterwards polished with armoril, *i. e.* the powder they use to polish armour with, and to give it a lustre, so that one may see his face in it with the powder of the cinders of the best tin.

This day we set out towards *Valence*, passing the *Ebro* by the bridge of boats, and lodged at *Galera*, a small village two leagues distant from *Tortosa*.

Sept. 16.

We passed by *Tregera*, whereabouts seemed to be the ruins of an old Roman way; *Mattheau*, *Salsandail*, and lay at *Lescouvas*, seven leagues. Near *Lescouvas* we found store of *Oleander*, with a red flower.

17.

We passed *Cabanas*, *Pobletta*, *Buriol*, *Villa reale*, *Annules*, seven leagues. This journey we saw a great many rivers quite dried up, and for above a month together had scarce any rain: that little that was always came just from the sea.

18.

We passed *Chinces*, *Almenaro*, *Moulvedere*, (*an Sargentus?*) *Massa-magril*, *Albalade*, and arriv'd at *Valence*, seven leagues. Near *Valence* the country is very populous and well cultivated. Abundance of mulberry-trees are planted in rows all the fields over. As we passed through the market-place at *Valence*, all the people houted at us, and threw parings of melons, &c. on our cloaks. It seems they are not used to see strangers and travellers there. This was the first place in *Spain* where we were searched. In this city is an university. I heard a professor read logick. The scholars are sufficiently insolent and very disputacious. One of them ask'd me, *Quid est Ens universale?*

versale? and whether I was of *Thomas Aquinas*'s opinion? Another, *Quid est Genus*? None of them understood any thing of the new philosophy, or had so much as heard of it; none of the new books to be found in any of their booksellers shops; in a word, the university of *Valence* is just where our universities were 100 years ago.

In the kingdom of *Valence* the King of *Spain* is not absolute; but to impose taxes, raise soldiers, &c. he must have the consent of the three estates, *i. e.* 1. The clergy. 2. The nobility. 3. The cities and villages: and, if one of these refuse to consent, nothing can be done. These three estates have six deputies, two for each, who are changed every third year. Of the two for the cities, one is for the city of *Valentia*, and the other for all the rest. Each city chusing a syndic, one is taken by lot to be a deputy. The six deputies have the care and government of the militia. Upon any urgent occasion the deputies must assemble the three estates, *i. e.* the chief of the clergy, the nobility, and the syndics of the cities.

The city of *Valence* is governed by six jurats or consuls. They are taken by lot out of six urns or burses, two out of each: in the first urn are the names of all the better sort of nobility that have the title of *Dons*: in the second urn the names of all the lower rank of nobility, that have not the title of *Dons*: in the third, the names of all rich citizens that are not gentlemen; they must have at least 400 crowns yearly rent besides what their wives bring. Besides these, there is a rationel and two syndics changed every third year; six advocates for their lives, and forty plebeians changed yearly. The city being divided into fifteen trades or companies, each company chuses two, which make thirty; the other ten are chosen, two by the rationel, and eight by the six jurats and two syndics, each chusing one. Of all these officers and the forty plebeians consists the senate. But nothing can be done, unless there be twenty nine of the plebeians present at least. There is also, 1. a judge for criminal causes, taken by turns out of the three urns, and changed yearly. He hath an advocate to assist him, who is changed yearly, but so that all the

advocates in the city have the place by turns: and a *Lieutenant criminal* taken by lot out of the forty plebeians.

2. A *Mustafa* who has the care of all kind of victuals, corn, weights, measures, &c. He is taken by lot out of the three burfes as the criminal judge is, and hath also a lieutenant out of the forty. Moreover there is a judge for civil causes taken out of the three burfes, who has an advocate like the criminal judge; but he cannot decide causes of above fifteen crowns.

The university is governed by the town, who every third year chuse a *Rector* that must be a canon. The other officers are a beadle, a serjeant, and a *puntadore*, who is to take notice when any professor fails to read. There are eight *Præpositi* in this university, four for divinity, two for the canon law, and two for the civil law; who have each 500 crowns yearly. There are also four readers for philosophy, seven for physick, one for the *Greek* tongue, one for the *Hebrew*, and two for the mathematicks. These have but small stipends, but all their scholars that come to hear their lectures pay somewhat yearly. If a professor promote three rich scholars, that are able to pay the fees, to any degree, he may promote a fourth that is poor for nothing. The degrees are the same with those in our universities, viz. 1. Batchelor after they have finished a course in philosophy; which degree costs about twelve crowns. 2. Master of arts, which costs eighty. 3. Batchelor in divinity, law, or physick, which costs sixteen. 4. Doctor, which costs 150. They may be masters of arts presently after they are batchelors if they will, and in like manner doctors. In the market at *Valence* and all *Spain* over, they divide hens and chickens into pieces, and sell them by quarters: they make great vessels of goats skins to put wine and oil in, and lesser bottles which they call *boto's*. The women paint, laying it on so thick as if one daubed *minium* upon a wall. No garrison nor soldiers here.

Sept. 24.

We set out from *Valence*, and passing by *Masanasse*, *Cataregi*, & *Selle* lodged at *Mussafes*, three leagues. Coming out of *Valence* we were fain to give money at three places, to avoid searching.

We

We passed *Cullera*, where we ferried over a great river called *Xucar*, and lay at *Gandia*. There is a college and an university, as appears by this inscription upon the wall of the col. *Sanctus Franciscus à Borgia, Dux Gandiæ*. 4. *Præpositus generalis Societatis Jesu* 3 *hoc Collegium et hanc Universitatem a fundamentis erexit* A.D. 1546. At *Cullera* the wine first began to be sweet, and three leagues off at *Gandia* the plantations of sugar-canes began. 2. Whether the nature of the soil, that was fit to nourish the sugar-canes, did not also contribute to the sweetness of the grapes? At *Gandia* we first found raisins of the sun (as they are called in *England*) in *Spain* they call this kind *Pansar*, and they seem to be the *Duracinæ* of the ancients. They are all white, round, and have a tougher skin than other grapes. They gather them when fully ripe, and dip them in a boiling *Lixivium* of water and ashes, just dipping them in, and taking them out again; and then dry them upon boards in the sun, taking them in by night or in foul weather. The name raisin comes from *Racemus*. Figs are dried just as they are gathered, not being dipp'd into any *Lixivium*.

I went to *Olives*, where and at *Gandia* are the engines for sugar-works, the best are at *Olives*. By the way we saw the sugar-canes growing in several places. They are planted in low wet grounds, well mucked and dressed, divided into beds or hillocks and furrows. They cut the canes close to the roots in *November* and *December*, and cutting of the slender tops, which afford no good juice, keep them under ground till *March*, and then prick them into these hillocks or beds; out of every *talea* or cut, shoot four, five, or six canes, which will be ripe the next *December*. The knots or joints of the cane at the bottom are very close together, scarce an inch asunder, but upwards the distance is more as the cane grows slenderer. Within is a white pulp or pith, full of sap, sweet as honey. They sell them at *Gandia* to eat, and, cutting them into pieces just in the middle between two knots, suck the pieces at both ends. To make sugar, after the canes are cleansed from the tops and leaves, and cut into pieces, they are first bruised either with a perpendicular stone running round, as apples.

apples to make cyder, or olives to make oil; or between two axes strongly capped with iron, horizontally placed and turned contrary ways; and then pressed as grapes or olives are. The juice thus pressed out is boiled in three several cauldrons, one after another. In the third cauldron it becomes thick and black, and is then put into conical pots, which at the bottom have a little hole stopped only with coarse and foul sugar; Mr. *Ligon* saith with plantain leaves. These pots are cover'd when full with a cake of paste, made of a kind of earth call'd in *Spanish* *Gritty*, and found near *Olives*, which is good to take spots out of clothes, which cap or cover sinks as the sugar sinks. [Mr. *Swift* told me, that the clay they use with us is tobacco-pipe clay, or very like it, and that the water in the clay served to wash down and carry away the *Molossos*, at least the clay helps the separation and precipitation of it.] These conical pots are put into other pots, into which by the hole at the *vertex* the juice drains down through the coarse sugar at the bottom. It drains so for five or six months, in which time the sugar in the conical pots grows hard and white, all the juice being either drunk up by the lute, or run out by the hole at the *vertex*. The juice is boiled again so long as it is good for any thing, but at last it makes only a foul red sugar that will never be better. The conical loaves of sugar, after they are taken out, are set to drain over the same pots for fourteen or fifteen days. To make the sugar more white, they must boil it again, but about one sixth is lost every time. A pound of sugar of twelve ounces is sold at *Olives* for three *sous* and a half; refined for five or six *sous*. The sugar-juice is strained through strainers of linnen, as it is put out of one cauldron into another. They take it out of the first and second cauldrons so soon as it begins to boil; but in the third cauldron they let it boil till the scum rises, and then take off only the scum with a scummer, and put it into a long trough to cool, and, when it is cool, put it into the conical pots. One scum rises after another in the third cauldron. The scum, when it is taken off, is white, but turns to a black liquor in the trough. They never refine the sugar more than three or four times. They use for the refining

refining of it whites of eggs, putting in two or three dozen into a cauldron. They use but one cauldron for refining. When it is refined, it grows white and hard in nine or ten days. The juice boiled up is eaten with bread toasted, as honey: the juice of the refined sugar is much better than the first juice. The Duke of *Gandia* sends presents of this refined juice to the Queen of *Spain*. When they refine it, they put a little water into the cauldrons, to dissolve it the better. But for a more exact description of the whole process of the sugar-works, I refer to *Piso* in his Natural History of *Brasil*, and *Ligon* in his Description of *Barbadoes*. The sugar of *Olives* is better than the sugar of *Gandia*. At *Meuttria* in *Granada* they also make a great deal of sugar.

About *Valence*, *Gandia*, &c. the earth is always wrought, and never lies fallow or idle. They reckon five *Raccolta's* or crops in one year. 1. Of mulberry leaves for silk. 2. Wheat and other *European* grain. 3. *Darsi*, i. e. *Maiz* or *Indian* wheat. 4. Grapes. 5. *Olives*; and 6. at *Gandia* sugar-canes. After the wheat is cut they presently sow the *Indian* wheat. They complained that lately for a great many years together they had very bad *Raccolta's* for want of rain, which had almost ruined *Spain*.

We passed *Benegana*, and lay at *Chativer* six leagues and a half. *Chativer* is an ancient town of the *Moors*, and was once head of one of their little kingdoms. About a league from the town began a very remarkable aquæduct made by the *Moors*. It was just over a river along the side of a hill, in most places not above a yard or two under ground, and had a great many funnels just like the tops of chimnies to give vent, and let out the water when there should be too much. The tops of these funnels were made of a red clay and pebble stones. The water came almost to the top in all of them, but run over but in one. Sept. 27.

We passed in sight of *Montesa*, a castle belonging to the knights of *Montesa* that wear a red cross; *Ortenente*, and lodged at *Bechert*, six leagues. 28.

Near *Alicant* among the mountains there is a very good breed of falcons. In the plains near *Alicant* grows abundance 29.

abundance of *Gramen spartum* Plinii five *sportularum Officinarum* J. B. i. e. matweed, of which the frails where- in they put raisins and other fruit are made. This in Spain they call *Spar*, at *Marseilles Asse*. The women hereabout gather abundance of this, and steep it in sea-water till it be well softened. Then they dry it and carry it by sea to *Marseilles*, where they sell it at eight *asus*'s the milliere: every milliere consists of ten packieres; every packiere of one hundred *Manado's* or handfuls. Of this they make cables for ships, baskets, &c. In this day's journey we saw a great many fountains covered with long arches to hinder them from being dried up. We passed *Elda*, *Novelda*, *Aspe*, *Clavillente*, *Albitella*, and lay at *Orivola*, eleven leagues.

Sept. 30. We came to *Murcia*, four leagues. Near *Orivola* (which city is an episcopal see) we observed many turpentine-trees, some in flower, and some with ripe berries. Near *Elda* they dig up a sort of *Selenite*, which they burn and put into wine to clarify it. About a league from *Orivola* began the kingdom of *Murcia*: two leagues from *Orivola* we were fain to give money, to avoid searching. *Murcia*, which gives denomination to this kingdom is a pitiful desolate town. The fish-market here is shut up in a cage or grate as at *Genoa*, the people crowding about it, and thrusting in their baskets as there.

Octob. 1. We travelled through a miserable desolate country to *Mula*, seven leagues.

2. We passed through *Caravacca*, where they drive a great trade of making little crosses of silver, brass, wood, &c. after that pilgrims, travellers, &c. have bought them, they carry them to the castle to touch them by a famous cross, which according to their fabulous legend descended miraculously from heaven, which forsooth infuses a wonderful virtue into them. We lay this night at an odd house four leagues off *Caravacca*, having travelled in all ten leagues.

3. We passed by *Venta nova*, and came to *Huesca*, eight leagues. At *Huesca* we first saw a yellowish white wine like sack. The kingdom of *Granada* began about four leagues before we came to *Huesca*. The town of *Huesca* belongs to the duke of *Alva*.

4. We passed by *Basa* and rested at *Venta* eight leagues. We

We travelled to *Guadix*, an episcopal see, and antient Roman colony. Upon the gates we took notice of this inscription. *Recepit Colonia Accitana Gemaliensis provinciae caput prima omnium Hispanicarum fidem Christi Jesu, rejeētis idolis, evangelizantibus sanctis Torcato & sociis, Anno salutis 70, Pontificatus S. Petri 37, imperii Neronis 13. Urbs Accis patrono suo sanctissimo D. D. 1593.*

Honorati sunt Amici tui Deus. Colonia Accitana.

We travelled to *Granada* six leagues distant from *De-finos*, where we lodged the night before. Here we saw the castle called *La Lhambra*, the seat of the Kings of *Granada*. Within the walls of the castle live abundance of people which dare not live in the city for debt or other causes. There is a fair palace begun by *Charles V.* and yet unfinished: the outside of it is square, but it is round within, having two rows of cloisters one above another round about the court. Adjoining to this is the antient palace of the Kings of *Granada*: within there is all the same kind of moresco work wrought in mortar and stone with gold and painting. The cloisters are supported by long slender pillars. In this palace is an octagonal chamber vaulted at the top, with eight doors, one in every side. If one stand in one angle and whisper to another that stands in the angle diametrically opposite, the voice is conveyed as in the whispering place at *Gloucester*: but if you stand in an angle that is not diametrically opposite you hear nothing. The reason of the conveying the voice is the vault above, and the corners being streightened into a very sharp angle or channel. In *Granada* are two great market-places, one called *Plazza nova*, the other *de villa Rambla*. In the great church are two monuments, one for *Ferdinand* and *Isabella*, with this inscription, *Mahometicæ sectæ prostratores, Hæreticæ pervicaciæ extinctores, Fernandus Aragonum & Helisabetha Castellæ, vir & uxor unanimes, Catholici appellati marmoreo clauduntur hoc tumulo.* The other is of *Philippus I.* and *Joanna*, daughter and heir of *Ferdinand* and *Isabella* without an inscription. In the river *Daro* that runs by *Granada* they find gold among the sand. In the mountains of *Sierra nevada* near *Granada* are said to be divers sorts of minerals, which are not at all looked after. Near *Motril* at the *Capo di Gatto* there is a mine of gra-

5.

6.

nates

nates covered with the sea. They are pointed as amethysts and chrystal, but the best come from *Africa*. We saw that day *Monte sacro*, a place within half a league of the town, of great devotion. In *Castile*, *Granada*, &c. the greater cities have a *Corregidore*, and the lesser an *Alcayde*, who administer justice, and are appointed and sent by the King to govern the towns. All over the kingdom of *Castile* they eat flesh upon *Saturdays*, and observe only *Fridays*.

Octob. 12. We left *Granada*, and, passing by *Santa Feda*, travelled to *Lotta*, eight leagues.

13. At *Lotta* we were troubled with soldiers that came from the frontiers of *Portugal* to take up their winter quarters. There had been of this party 2600, but this summer at *Alcantara* they were reduced to 900, the rest being slain, or dead of diseases. We passed this day by *Archidona*, *Lalameda*, *Larouda*, and lay at *Pedreira*, ten leagues.

14. We passed by *Offuna*, *La Pobra*, and lay at *Elazabel*, ten leagues. This country was the best we saw since we came into *Spain*, the land being for the most part well planted and cultivated.

15. We passed by *Gandula*, and arrived at *Sevil*, seven leagues. Between *Gandula* and *Sevil* there are abundance of olive-trees. Here we first saw the greater sort of olives, which are usually eaten in *England* for a sallet, called the great *Spanish* olive; all that we had seen in *Italy* or in *Spain* before being of the lesser sort. Here is a brave aqueduct of brick, which conveys water from *Carmona*, six leagues distant: under the arches there are *Stalactites*, as at the aqueduct of *Pisa*. The gallions bring nothing home from the *West-Indies* but plate, the merchants ships are loaden with leather, *Cacao*, sugar, *Lance di Vigonna*, &c. Of the *Cacao* nut they make *Chocolate* thus; first they toast the berries to get off the husk, then pound the kernels to powder, and to every *miliao*, i. e. three pound and a half of powder, they add and mingle two pound of sugar, twelve *Vanilla*'s, a little *Pimentone* or *Guiny* pepper (which is used by the *Spaniards* only) and a little *Acchiote* to give a colour; but these two last may be omitted. They melt the sugar, and then mingle all well together, and work it up either in rolls or loaves.

Sevil

Sevil hath of late decayed very much, and doth continually decay more and more, the trading being most removed to *Cales*, the reason whereof is because they pay about twenty seven *per cent.* for all merchandises at *Sevil*, and but four or five *per cent.* at *Cales*. The chief places to be seen in *Sevil* are 1. The great church. 2. The King's or assistants palace. 3. The archbishop's palace. 4. The steeple of the great church, like *St. Mark's* tower at *Venice*, which you ascend almost to the top without stairs, by gently inclining plains. 5. The *Franciscan* convent. 6. The *Longha*, where the merchants meet about the affairs of the flote. 7. The convent of *Nostredame del peuple*. 8. The bridge of boats over the *Guadalquivir*, i. e. the river *Bætis*. The town on the other side this river is called *Triana*. 9. The inquisition or castle of *Triana* just over the bridge. 10. An old tower, called *Torre d'oro*, where *St. Ferdinand* that recovered *Sevil* kept money made of leather. 11. The aqueduct. 12. The old palace and garden of the *Moors*. Near the bridge along the river side they come every night with their coaches to take the *fresco*. In the great church between two altars are three monuments for *St. Ferdinand* the Wise, his wife *Beatrice*, and his son *Alphonfus*. The same epitaph in *Hebrew*, *Arabick*, *Greek*, and *Latin*.

Hic jacet illustrissimus Rex *Fernandus* Castelli & Toleti, Legionis, Gallicæ, Sibillæ, Cordubæ, Murcia & Jaheni, qui totam Hispaniam conquirit, fidelissimus, veracissimus, constantissimus, justissimus, strenuissimus, devotissimus, liberalissimus, patientissimus, piissimus, humillimus, in timore & servitio Dei efficacissimus; qui contrivit & exterminavit penitus hostium suorum proterviam; qui sublimavit & exaltavit omnes amicos suos, qui civitatem *Hispalem* quæ caput est & metropolis totius Hispaniæ de manibus eripuit paganorum, & cultui restituit Christiano; ubi solvens naturæ debitum ad Dominum transmigravit ultima die Maii, Anno ab incarnatione Domini 1252.

In the same church is *Fernandus Columbus*, *Christopher Columbus's* son buried, with this epitaph.

A qui jace el mucho magnifico signor Don Hernando Colon. el quel expleo y gasto toda su vida y facenda en aumento de los Lettras y en juntar y perpetuar en esta ciudad todos los libros de todas las sciencias qui in su tempo halla y en ridurlos a quatro libros segun estan a qui señalados. Fallecio en esta ciudad a 12 di Julio 1532. An. de su edad 50 an. 10 meses & 14 dies. Fue Hyio del valeroso & memorabile Signor Don Christophoro Colon. primera Admirante qui descubrio las Indias y nuevo mundo, en vida de los Catholicos Reys Don Fernando y Donna Isabella de gloriosa memoria, a ouxe de Ottobre dy mill quatrocentos y noventa, y dos annos, y partio del puerto de Palos a descubrirlas con tres Carabelas y noventa personas a tres de Agosto..... iuntas..... y bolbio a Castilla con la vittoria a quatro di Marzo del anno siguiente, y torno despues otras dos vezes a poblar lequale scubrio, y al fin fallecio a Valladolid a vente de Maio de mill y quinentos y seys annos, Rogad al Sennor por ellos.

Chocolate is sold at *Sevil* for something more than a piece of eight the pound. *Vanillas*, which they mingle with *Cacao* to make *Chocolate*, for a *Real di plato*. *Acchiate*, which they mingle with the other ingredients, to give a colour, is made of a kind of red earth brought from *New Spain*, wrought up into cakes, it is sold for a *Real di plato* the ounce. All the oil and wine they have in the *West-Indies* goes from *Spain*, they not being permitted to plant vines or olive-trees, that they may always have a dependance upon *Spain*. At and near *Sevil* we paid two *Reals de quarto* a bed; bread, wine, flesh, and all other commodities excessive dear, excepting only olives and pomegranates, which were better here than in any other part of *Spain*. There had lately been a great plague in *Sevil*, which had very much depopulated and impoverish'd, indeed almost ruin'd the city.

I set out from *Sevil* towards *Madrid*: the first day we travell'd to *Carmona*, where the aqueduct foremen-
tion'd

tion'd begins, six leagues; in all which way we saw no houses, but a great many aloe-trees.

We passed *Les fontes*, and lay at *Euia*, a great town of above 20,000 inhabitants. Between *Carmona* and *Euia* is a very good country, with abundance of corn and olive-trees. *Offuna* is within four leagues of *Euia*, where the Duke of *Offuna* hath a palace. We travell'd this day nine leagues.

We passed over the river *Xenil* that runs into *Guadalquivir*, baited at *Arrasith*, and lodg'd at *Cordova*, eight leagues. About a league from *Cordova* we passed another little river that runs into *Guadalquivir*. Before we enter'd *Cordova* we rode over a great stone bridge that here crosses the *Guadalquivir*. In the middle of the bridge stands a statue erected to the angel *Raphael* with this inscription.

Beatissimo Raphaeli Angelorum proceri, custodi suo vigilantissimo, qui ante annos 300 sub Paschale antistite, populum peste depopulante se medicum tantæ cladis futurum prædixit, qui subinde Anno 1578, venerabili Presbytero Andrea de las Roelas S. S. M. M. exuvias evulgavit, & tandem patefecit Cordubensium tutelam sibi à Deo demum datam. Quare ut justa gratitudo diu staret S. P. Q. Cordubensis hanc lapideam statuam cautus & pius erexit, multâ procurratione Domini Josephi de Valdeanas & Herera & Domini Gundesalvi de Cea & Rios Senatorum, Pontifice Innocente X. Hispan. rege Philippo IV, Episcopo Domino Fratre Petro de Tapia, Prætorè Domino Alphonso de flores & monte negro: Anno 1651.

The most considerable places in *Cordova* are 1. The bishop's palace. 2. The *Cavallerisca*, where the King keeps a great many horses. 3. The ruins of *Almansor's* palace, the last King of the *Moors*. 4. *Plassa di Corridera*. 5. The church of the *Augustine* friars. 6. The great church, which was anciently a mosque. It is large but very low, supported by a great many rows of pillars in a quadrate order, sixteen rows one way and thirty another. Upon many of the pillars are *Moors* heads carved in the stone, and one or two with turbants on. In the

middle of this church is the great chapel, where are several bishops interred. In one of the chapels that is now dedicated to St. Peter, in the *Moors* time was kept a thigh of *Mahomet*: round about the cornish of this chapel, and that part of the church next it, is an *Arabic* inscription. The people complain grievously that *Cor-dova* is quite ruined and undone by gabels and taxes.

27. We left *Coroova*, and after a league or two riding enter'd the *Sierra Morena*, a miserable desolate mountainous county, and lodged at a little village called *Adamus*; six leagues.

28. We travelled all day through the *Sierra Morena*, and lay at a village called *La conquista*; nine leagues.

29. In this day's journey we saw abundance of galls upon the *Ilices*, which were of like bigness, figure, colour, consistency, and other accidents with those that grow upon oaks. This day we first met with red wine again, which they call *Vino tinto*. We got safe out of *Sierra Morena*, and came to *Almedovar del campo*, a great lough, nine leagues. About the middle of *Sierra Morena* are the bounds of *Castilia nova* and *Andaluzia*.

Oct. 30. We passed by *Caraquel*, *Cividad real*, and lay at *Malagon*, ten leagues. Between *Malagon* and *Cividad real* we passed over the river *Anas*, now called *Guadiana*, which was there but a little brook. In this day's journey we met with a great many great flocks of sheep and goats, going towards the *Sierra Morena* out of *Castile*: it being the custom all summer to feed their sheep upon the mountains of *Castile*, and in winter in the *Sierra Morena*.

31. We passed by the ruins of an aquæduct, about four leagues from *Malagon*, then *Yvenas* a good big lough, and lay at *Orgas*; ten leagues.

Nov. 1. We passed through *Toledo*, and lay at *Esquinas*, eleven leagues. As soon as ever we passed the *Sierra Morena*, we felt a great change of weather, the warm air that comes from *Afric* and the *Mediterranean* sea being stopped by the interposition of the mountains. This day there was here a hard frost and pretty thick ice. The most considerable things in *Toledo* are, 1. The bridge over *Tagus*, consisting of but two arches, one great one and one little one. 2. The shambles, where, notwithstanding

standing the coldness of the day, I saw abundance of flies, which confutes the story that there is but one great fly there all the year. 3. The great church, where there are many monuments of bishops, but without inscriptions; in the *Capella maggior* lie interred two Kings, and in the *Capella de los Res* four Kings. 4. The King's palace. 5. The ruins of a famous engine to raise up water to the King's palace. There is so little of it remaining, that it is impossible thence to find out all the contrivance and intrigue of it.

Between *Toledo* and *Madrid*, the country is very populous, and the soil very good. All along the road from *Seville* to *Madrid*, the common fare is rabbits, red-legg'd partridges, and eggs; which are sufficiently dear.

We arrived at *Madrid*: six leagues near the town we passed over the river *Xarante*. *Madrid* is very populous, well built with good brick houses, many having glass windows; which is worth the noting, because you shall scarce see any in all *Spain* besides. The streets are very foul and nasty. There is one very fair piazza or market-place, encompassed round with tall and uniform houses, having five rows of balconies one above another, and underneath portico's or cloisters quite round. The chief things to be seen in *Madrid* are, 1. The prison. 2. The piazza just now mentioned. 3. The King's chapel. 4. The palaces of several noblemen, as that of the Duke of *Alva*, that of the Duke of *Medina de los Torres*, &c. 5. The King's palace, where there is the King's *Cavallerisca* and the Queen's *Cavallerisca*. 6. A great piazza before the palace, where are abundance of coaches always attending. 7. The *English* college of *Theatines*. 8. *El retiro*. Out of the town the *Escorial* and *El Pardo*.

I set out from *Madrid* for port *St. Sebastian*. We passed within sight of the *Escorial* and *El Pardo*, and lay that night at *St. Augustin*; six leagues.

We passed *Butrago* and lay at *Samoserra*, all the way a barren, miserable, mountainous country; eleven leagues.

We passed *Frecedille* and lay at *Aranda* having crossed the river *Durius* or *Duero*; eleven leagues.

OBSERVATIONS Topographical,

8.

We passed *Babalon* and *Lerma*, where is a convent of *Dominican* friars and a palace of the Duke of *Lerma's*, and came that night to *Burgos*; twelve leagues. The most considerable things in *Burgos* are, 1. The bridge over the river *Relarzon*. 2. The gate at the end of the bridge, where are the statues of *Charles V*; of *Janus Calvus*; of *Diego Porcellero*; of *Fernandez Gonsales*; of *Nunio Páscures*; of *Don Carlote*, all famous men of *Burgos*. 3. The market-place. 4. The great church in which are a great many monuments of bishops and canons, two great monuments, of *Pedro Fernando di Velasco*, constable of *Castile*, and his wife *Mencia di Mendoza* countess of *Hara*; This night we lodged at *Quintora-willes*; five leagues.

10.

We passed by *Pancorva*, a place very famous for good water, *Miranda* a great town, where there is a good bridge over the river *Iberus*, and after that we passed over two other rivers *Baias* and *Sadurra*, and lay at *Erminian*; eleven leagues. At *Miranda* there is a great market for wheat.

11.

We travelled to *Vittoria*. Over one of the gates is the statue of King *Bamba*, and inscribed in gold letters, *Hæc est victoria quæ vincit*; four leagues. *Vittoria* is the chief city of a little country called *Alaba*. We passed this day by *Salines* the first town of *Guipuscoa* and lay at *Escurias*; nine leagues. In *Guipuscoa* they pay no taxes or other duties to the King, without the consent of the country. The whole province is more commonly called *Provincia* than *Guipuscoa*; it is cantoned out into a great many corporations and villages, every one of which send one, two, or three representatives to the general meeting when there is any public business. All offices are annual, and chosen diversly, according to the differing customs of the towns. The chief officer in each town to determine all civil and criminal causes is the *Alcalda*; but from him they may appeal to the governor of the province, sent by the King every third year; and from the governor to the King's council at *Valladolid*. Next to the *Alcalda* are two *Regidores* to look after the prices of all commodities; a *Bolser* for the treasury; a *Medino* for the prison, *Argozils* or serjeants, &c. They boast that they are the walls of *Spain*, and therefore have many privileges. *Guipuscoa* is under the bishop of *Pampelona*. In
Guipus-

Guipuscoa and *Biscay* they have a peculiar language of their own, and therefore send their children to school to learn *Spanish* (which they call *Romance*) as we do ours to learn *Latin*. The searchers having hinder'd us, we were forced to travel a great way in the night. We were lighted by *Tias* or *Teas*, which burnt as well, and gave as good a light as torches. When they went out they tossed them up and down in their hands, which kindled them again. These *Teas* (so called, doubtless from the *Latin* word *tæda*) are very commonly used in this country, and are nothing else but bastons of wood hacked and cleft (but so as the pieces hang together) and afterwards soundly dried in an oven or chimney. Along the middle they use to cleave them almost quite asunder. They are made of several sorts of wood, of *Robla*, i. e. oak, *Aiga*, i. e. but the best of *Avellana*, i. e. hazel. I wonder much at this, unless they have some way of preparing the wood, by steeping it in oil, or other inflammable matter. The *tædæ* of the ancients were made only of the trunks of old and sappy pines.

We passed by *Mondragone*, where there is a *fabrica* of arms for the King, *Oniate*, *Legaspa*, *Villa real*, and lay at *Villa franca*, seven leagues. We left *St. Adrian*, which is the ordinary road, a little on our left hand. This country is very populous and well wooded, all the hills being covered with oaks. They use no ploughs, but turn over the ground with tridents of iron; four or five of them working together, and thrusting in their tridents all together, turn up a yard or two of earth at a time, which they afterwards dress and level like beds in a garden. The people are something better condition'd than the *Spaniards*, richer, and far more populous. 1. Because there is a better government and greater liberty. 2. There is abundance of wood and iron. 3. More rain than in the other parts of *Spain*.

12.

We passed *Tolosa*, and arrived this night at *St. Sebastian*, having travelled eight leagues. The most observable things in *St. Sebastian* are, 1. The walls and guns. 2. A great convent of *Dominican* friars, in which there is a famous pair of stone stairs, each step being of

13.

of one intire stone, and supported only on one side.

3. The haven. The government of *St. Sebastian* consists of a great council of all that have one or more houses and are married; but none can bear office unless he have two houses; of these there are not above 150 or 200, though the town be very populous, containing about 24,000 souls. Once in a year all the names of this 150, or 200, are put into an urn, and a child takes out eight to be electors. Every one of these eight chuses his man. The old magistrates, that are just then going out, divide these eight that the electors have chosen into four pairs, fitting them as well as they can, *v. g.* an old man and a young together, &c. These four pairs are put into an urn. The first pair that are drawn out are the two *Alcaldas* for that year; the second pair the two deputy *Alcaldas*; the third pair the two *Regidores*; the fourth pair, the two deputy *Regidores*. In much the same manner they chuse two jurats, one syndick or attorney-general, one treasurer, &c. all these officers make a lesser senate, but in businesses of importance the whole number meets. There is no distinction of *Nobiles* and *Plēbeii*, but all that are descended from *Guipuscoans*, that are married and have one house, are in a capacity to be electors; all that have two houses, to be magistrates. The jurats places are most desired, there being a great many ecclesiastical preferments belonging to the town, the disposition whereof, when they come to be vacant, is in them, who usually bestow them upon their relations and friends.

Every winter there are several whales caught upon this coast, they coming hither in winter and frequenting here, as they do upon the coast of *Greenland* in summer. They catch them by striking them with a harping iron, after the same manner as they do sword-fish upon the coast of *Calabria* and *Sicily*. Abundance of cyder made about *St. Sebastian* and *Bayonne*.

14

From *St. Sebastian* I travelled through *Orogna*, *Irun*, on the left hand of which is *Fontarabia*, a strong fort just on the frontiers of *Spain*. About half a league from *Irun* is the river that parts *France* and *Spain*. In the middle of

of this river is an island, where the kings of *France* and *Spain* met, when *Lewis XIV.* the present King married *Philip IVth's* daughter. The island was divided just in the middle, and a house built, so that, at the table where they sat to eat, the King of *France* sat in *France*, and the King of *Spain* in *Spain*.

Spain is in many places, not to say most, very thin of people, and almost desolate. The causes are. 1. A bad religion. 2. The tyrannical inquisition. 3. The multitude of whores. 4. The barrenness of the soil. 5. The wretched laziness of the people, very like the *Welsh* and *Irish*, walking slowly, and always cumber'd with a great cloak and long sword. 6. The expulsion of the *Jews* and *Moors*, the first of which were planted there by the Emperor *Adrian*, and the latter by the Caliphs after the conquest of *Spain*. 7. Wars and plantations. In all the towns, especially in the south and west parts of *Spain*, a great many ruins of houses to be seen. Within a quarter of a league of a town you begin to see ground ploughed, else all a wild country, and nothing but rosemary, cistus, juniper, lavender, broom, lentiscus, &c. growing in the fields and on the hills. Little or no hay any where in *Spain*, they feeding their mules and horses with straw. At least one half of *Spain* is mountainous.

The *Spaniards* are not so abstinent as most people take them to be, eating the best they can get, and freely enough if it be at another man's cost: and in inns never refusing partridges, quails, &c. for the dearneſs if they have but money. Laziness and sloth makes them poor, and poverty makes them pinch their bellies and fare hardly. They seldom mingle water with their wine, it being a common saying among them *Vino poco & puro*, though all over *Spain* the wine is very hot and strong. They delight much in *Pimentone*, i. e. *Guiny* pepper and mingle it with all their sauces. In roasting of meat they never use dripping pans but draw the coals just under the meat, which though it be not so cleanly yet is the quicker and more thrifty way for saving of ſewel. They tear rabbits in ſunder with their hands when they are almost roasted, and ſtew them in a pot with water and *Pimentone*. To toast bread they throw it upon the coals. They
long

long and ask for every thing they see, to avoid which a merchant that travelled with me was wont to put in something into his victuals which they did not love. They take tobacco much in snuff, and if one take out a box of snuff he must give some to all the company. The best person in the company at table cuts and tears the meat in pieces, and gives to every one his share.

They are most impertinently inquisitive, whence you come? whither you go? what business you have, &c. most horribly rude, insolent, and imperious; uncivil to strangers, asking them, what do you come into our country for? we do not go into yours. [This is to be understood of the middle and inferior sort of people, many of the gentry being very civil and well-bred.] Their children are the most unmannerly and ill-bred of any in world. The sons of *French* fathers and *Spanish* women when they are grown up often turn their fathers out of doors, having many privileges above them for being born in *Spain*. They are extremely given to lying. *Almuzzos* and such kind of fellows not to be believed or trusted in any thing they promise.

They ride altogether upon mules, and carry their portmanteau's before them, for fear they should be lost or stolen from behind them; they lie between a high pommel of the saddle and an iron hook. Instead of stirrups persons of quality use great clogs of wood of the shape of shoes without heels. They cut away the mules hair close to the skin under the saddles and portmanteau's, to avoid galling. Of this bastard breed of animals the males are usually bigger than the females. 2. Whether the reason be that they are always bred of a mare and an he ass? 2. They piss very often. 2. Whether the reason be the sharpness of their urine or the smallness of their bladder? 3. They piss almost always when they go through water. 4. They shoe them with shoes a great deal broader than their feet, to prevent I suppose the breaking of their hoofs. Under the mouths of their mules of burthen they usually hang a net with provender in it. These beasts are better at climbing of mountains than horses, have a greater courage to endure long and hard travel, and besides are maintained with less charge.

The

The *Spaniards* seldom ride alone, but stay for a *treppas* as they do for a caravan in *Arabia*. The common phrases or forms of salutation, when they meet or pass by one another, are *Garda Dios vóstes*, i. e. *vous autres* [God defend you] *A Dios* [adieu] *Vaga con Dios* [God go along with you.] When they are angry *Cornuto*, i. e. cuckold, is the first word, and sometimes *Cornutissimo*. When they speak to their mules or boys they send of errands, they say, *Anda Cornuto*, [go cuckold.] When they refuse a courtesy, or compliment to drink first, go first or the like, they say, *Non per vita mea*, [no by my life.] At any thing strange or ridiculous they cry out, *Cuerpo di Dios* or *di Cristo* [body of God or body of Christ.] When they call to one to make him hear, instead of *Escoutes* in *French*, or *Senti* in *Italian*, they cry *O-yes* just as our criers do in *England*. When they put off a beggar not giving him an alms, they say, *Vóstes perdonné*. [Good friend, pardon or excuse me.]

As for their religion the *Spaniards* are the most orthodox and rigid *Romanists* in the world, it being a saying among them *Faltando in uno punto a Dios*. [If you leave the church in one punctilio, God be with you, you must needs be damned.] All over *Spain* there are abundance of pitiful wooden crosses set up in the middle of heaps of stone. Under all the pictures of the *Virgin Mary* is written * *Concebida sin peccado originale*. At the *Ave-Mary* bell they all fall down upon their knees; whereas in other countries they are contented only to pluck off their hats. When they have done their devotions, as also after their meals when they take away, and when they go to bed, they say *Sia lodato il santissimo Sacramento*, [praised be the most holy sacrament.]

For fornication and impurity they are the worst of all nations, at least in *Europe*; almost all the inns in *Andaluzia*, *Castile*, *Granada*, *Murcia*, &c. having whores who dress the meat, and do all the business. They are to be hir'd at a very cheap rate. It were a shame to mention their impudence, lewdness, and immodest behaviours and practices. In *Catalonia*, *Guipuscoa* and some other places they are not so bad.

* Conceived without original sin.

They

They are so lazy that in their shops they will say they have not a commodity rather than take pains to look for it: not to be hir'd to carry a portmanteau, go of an errand, &c. but at an excessive rate. Mercers never tie up any thing they sell, and, if they allow paper, they only rudely mumble up the commodities in it. Of their fantastical and ridiculous pride, and that too in the extremest poverty, all the world rings. If there be any imployment that you would set them about which they think themselves too good for, they presently say, Send for a *Frenchman*. Indeed the *French* do almost all the work in *Spain*. All the best shops are kept by *Frenchmen*, the best workmen in every kind are *French*, and I believe near one fourth or one fifth part of the people in *Spain* are of that nation. I have heard some travellers say, that, should the King of *France* recall all his subjects out of *Spain*, the *Spaniards* would hazard to be all starved to death.

Bread is very scarce and very dear in many places of *Spain*, because of the barrenness of the soil and want of rain, but chiefly because of the sloth of the people in letting a great deal of ground lie untill'd, and in not taking the pains to fetch corn and bread from those places where there is plenty. So that in a day's journey the price of bread will be trebled, and in another day's journey fall as much again. This summer there was a tumult at *Madrid*: the poor people gathering about the King's palace cried out, Let the King live, but let the ill government die; let exactors die, &c. just as they did at *Naples* in the rebellion under *Masaniello*. Upon which the King sent to all the towns about for bread-corn, and in two or three days bread was very plentiful and cheap. All over *Catalonia* bread was very cheap. The *Spanish* bread is commended for the best of the world, and well it may be, if, as we have heard, they pick their wheat grain by grain.

At my being at *Madrid* there was an engineer there sent by the emperor, that had invented a plow, called by the *Spaniards*, a *Sembrador*, to sow corn at equal distances, and one grain in a hole; the description whereof hath been since published in the *Philosophical Transactions*.

In all kind of good learning the *Spaniards* are behind the rest of *Europe*, understanding nothing at all but a little of the old wrangling philosophy and school-divinity.

The people are much discontented all over *Spain*, complaining of taxes, evil counsellors, &c. but they have a good opinion of, and are generally well-affected to their King, whose intentions they say are very good.

As for their habit and dress in that they are to be commended that they are constant to the same fashions, tho' they be not the most convenient that might be devised. To change for the better I think it rather commendable than blame-worthy; but to change out of meer levity or an apish imitation of others is foolish and unreasonable. They wear great hats with broad crowns, and the top broader than the bottom. Their hair most commonly, but especially when they travel, they tie up in a knot behind, and sometimes braid like women. Their bands lie upon black collars just of the same bigness or a little bigger. They are joined to the collar and they put on collar and band together. They wear very much cambrick half-shirts, and have their sleeves open before and behind both winter and summer; they have great skirts upon their doublets. Their breeches are very strait and close to their thighs, and button'd down on each side, and reach a little lower than the knee. They wear very slight-wrought black silk stockings, that the white linnen stockings which they wear underneath may be seen through them. Their shoes just fit for their feet, very light and thin, with low heels. Over their doublets they wear a close coat, or jerkin with open sleeves like the doublet, and, for the most part, with hanging sleeves like childrens, yet never reaching lower than their skirts: a very long sword, and a short dagger hanging just behind them; and at last, over all, a cloak with a great cape.

The women wear great vardingales, standing so far out on each side, that to enter in at an ordinary door they are fain to go side-ways: when they go abroad are cover'd with a vail of black, having only a hole left for one eye. The poor people wear shoes made of pack-thread.

The

The most noble sport in *Spain* is the *Jeu de Taureau*, or bull-fighting, practised at *Valencia, Madrid, &c.* At *Madrid* three times in the year, where in the market-place a brave don on horseback, and a great many pages on foot fight with a wild bull: when one bull is kill'd or much wounded they turn in another. Seldom but some of the pages are kill'd. And with these cruel and bloody spectacles the people are much delighted, as were the *Romans* of old in the time of heathenism.

He, that desires to know more of the good qualities of the Spaniards, may read Mr. Galliard's character of Spain.



Collated & Perfect.

J. R.
1783.